

## **Jet Propulsion Laboratory History Collection Source List**

The History Collection Source List and related indexes include those documents now preserved in the JPL Archives, as well as documents located in other collections which were thought to be significant by the JPL Historian in the mid 1970s. Those documents now found in the JPL Archives are indicated on the Source List by the following locations:

**FILES -- Files of the Historian's Office**

**BOOKSHELF -- Bookshelves in the Historian's Office**

To find other documents, see the appropriate location for each one (if they still exist): the JPL Library, JPL Central Document Control, Millikan Library at Caltech, Caltech Archives, Caltech Aeronautics Library, Correspondence Files, and individual files.

RESEARCHER'S MANUAL

How to Use the HSTFN Index to  
the JPL Historical Archives

The HSTRN Index classifies documents, articles, and books according to author, subject, and date, as explained below.

#### AUTHOR INDEXING

Format: An author is listed by surname, followed by the first two initials.

Example: PICKERING W H  
GODDARD R H  
EMME E M ED  
JAKUBSKI Z TRANS

Only material written, edited, or translated by an individual is listed under his name. For information about an individual see: BIO-SURNAME F M, where F and M stand for first and middle initial, respectively.

#### SUBJECT INDEXING

When a document falls under both a general and a specific category it will usually be listed only under the more specific category.

Example: "Storable Liquid-Rockets"

The possible categories are:

PROPELLANTS  
LIQUID PROPELLANTS  
LIQUID PROPELLANT ROCKETS

This particular document is filed only under

LIQUID PROPELLANT ROCKETS

Cross-references have been written to help the researcher find the most suitable category. In addition, there is a listing

of all the subject headings used (the "Descriptor Thesaurus") in the JPL History Office.

When the following words describe a document, they are used as subject headings:

BIBLIOGRAPHY

CHRONOLOGY

DIRECTORIES

DRAWINGS

FILMS

INTERVIEW—SURNAME F M

MAPS

MISSION REPORTS

PATENT

PHOTOS

#### DATE INDEXING

At the end of the Index is a chronological listing of documents by date of publication. If the document has no discernible date of publication, either an approximation is made or the date of events described by the document are used.



## JPLHF DOCUMENT NUMBER

Across from each title is a number such as:

05 00497 XF

The column on the far right describes the general location of the document. The key to the location code is:

F	files of the Historian's Office
S	bookshelves in the Historian's Office
L	JPL Library
M	Millikan Library, Caltech
R	Central Document Control
P	Archives, Caltech (basement of Millikan)
A	Aeronautics Library, Caltech
C	Correspondence files
<del>0 (zero)</del>	<del>Other</del> <i>not used</i>

The column second to the farthest right contains the "description code," according to the key:

X	Single document, not broken down into parts
Z	A collection of documents, or an anthology
A, B, C,...	either 1) related articles, such as serial articles in a journal or 2) component parts of a "Z" document, such as chapters in a book

The number (in this example, 05 00497) is the document's file number.

## DOCUMENT LIST

The title of a document, as it appears in the printout is a very short summary of topics it covers. Often a more complete picture of the document is obtained by referring to the listing by document number in the front of the Index, entitled "Cross-references and Source Lists." In this listing, both the date and all the subject headings for each document are given.

Source  
~~BOOK~~ LIST # 1

INTERNATIONAL LAW AND

SPACE EXPLORATION

- | <u>No.</u> | <u>Title</u>   |
|------------|--|
| 1.         | Jessup, Philip C., and Taubenfeld, Howard J., <u>Controls for Outer Space and the Antarctic Analogy</u> , New York: Columbia University Press, 1959.   |
| 2.         | U. S. Congress, <u>Legal Problems of Space Exploration, A Symposium</u> , Committee on Aeronautical and Space Sciences, U. S. Senate, March 22, 1961.  |
| 3.         | Haley, Andrew G., and Heinrich, Dr. Welf, eds. <u>Second Colloquium on the Law of Outer Space</u> , London, 1959, <u>Proceedings</u> . Printed in Austria, 1960.   |
| 4.         | U. S. Congress, <u>Survey of Space Law</u> , Staff Report of the Select Committee on Astronautics and Space Exploration, 86 Congress, 1st Session, House Document No. 89, 1959.  |
| 5.         | Lipson, Leon, and Katzenbach, Nicholas deB., <u>Project Reporters, Report to the National Aeronautics and Space Administration on the Law of Outer Space</u> , American Bar Foundation, Chicago, Illinois, July, 1961.   |
| 6.         | U. S. Congress, <u>International Aspects of the Exploration and Use of Outer Space, 1954-1962</u> , Staff Report prepared for the Committee of Aeronautical and Space Sciences, U. S. Senate, 88th Congress, 1st Session, (Senate Document No. 18), May 9, 1963.                               |
| 7.         | U. S. Congress, <u>Communications Satellites</u> , Hearings before the Committee on Science and Astronautics, U. S. House of Representatives, 87th Congress, 1st Session, May and July 1961, No. 19, Part I.   |
| 8.         | _____, "Report of a Conference on Research and Teaching, The Application of Social Science Methods to the Study of International Law," from the <u>Proceedings of the American Society of International Law</u> , 1963, Washington D. C.   |
| 9.         | Haley, Andrew G., <u>Space Law and Government</u> . New York: Appleton-Century-Crofts, 1963.   |
| 10. (0019) | Kaplan, Mortan A., and Katzenbach, Nicholas deB., <u>The Political Foundations of International Law</u> . New York: John Wiley & Sons Inc., 1961.  |
| 11.        | Haley, Andrew G., and Schwartz, Mortimer D., eds., <u>Proceedings of (Oct. 1961) the Fourth Colloquium on the Law of Outer Space, (International Institute of Space Law of the International Astronautical Federation)</u> , Norman Oklahoma: University of Oklahoma Research Institute, 1963. |

12. U. S. Congress, Soviet Space Programs; Organization, Plans, Goals, and International Implications, Staff Report prepared for the Committee on Aeronautical and Space Sciences, U. S. Senate, 87th Congress, 2nd Session, May 31, 1962. (See Chapter VI, "Soviet Attitude Toward International Law and Outer Space,")
13. Schwartz, Mortimer D., Proceedings of the Conference on Space Science and Space Law. (University of Oklahoma, June 18-20 1963.) Fred B. Rothman & Co., South Hackensack, N. J., 1964.
14. National Aeronautics and Space Administration, Conference on the Law of Space and of Satellite Communications, A Part of the Third National Conference on the Peaceful Uses of Space, Chicago, May 1963. Scientific and Technical Information Division, NASA SP-44, Washington D.C., 1964.
15. McDougal, Myres S., Lasswell, Harold D., and Vlasic, Ivan A., Law and Public Order in Space. New Haven and London: Yale University Press, 1963.
16. Cohen, Maxwell, ed., Law and Politics in Space. (Proceedings of the First McGill Conference on the Law of Outer Space, 12 and 13 April, 1963) Montreal: McGill University Press, 1964.
17. Haley, Andrew G., ed., Proceedings of the Fifth Colloquium on the Law of Outer Space. (International Institute of Space Law of the International Astronautical Federation.) Held at Varna, Bulgaria, Sept. 23-29, 1962. Washington D. C., 1963.
18. Haley, Andrew G., ed., Proceedings of the Sixth Colloquium on the Law of Outer Space. (International Institute of Space Law of the International Astronautical Federation.) Held at Paris, France, Sept. 26-28, 1963. Washington D. C., 1964.
19. Haley, A. G., and Schwartz, M. D., eds., Proceedings of the Seventh Colloquium on the Law of Outer Space. (International Institute of Space Law of the International Astronautical Federation.) Held at Warsaw, Poland, Sept. 9-10, 1964. University of Oklahoma Research Institute, Norman, Oklahoma, 1965.
20. de Seda, Anthony M., Law of the Extraterrestrial Space, Vol. I, unpublished monograph, 1965.
21. Quimby, Freeman H., ed., Concepts for Detection of Extraterrestrial Life, NASA Scientific and Technical Information Div., SP-56, Washington D. C., 1964.
22. \_\_\_\_\_, Proceedings of the Fourth National Conference on the Peaceful Uses of Space. NASA Scientific and Tech. Info. Div. Pub. No. SP-51, Held in Boston Mass., April 29-May 1, 1964. Washington D. C., 1964.

23. U. S. Congress, Proposed Studies on the Implications of Peaceful Space Activities for Human Affairs. Prepared for the NASA by the Brookings Institution, Report of the Committee on Science and Astronautics, U. S. House of Representatives, Eighty-Seventh Congress, First Session, March 24, 1961.
24. U. S. Congress, Posture of the National Space Program. Report of the Committee on Science and Astronautics, U.S. House of Representatives, Eighty-Eighth Congress, First Session, Serial B, Washington D. C., 1963.
25. U. S. Congress, United States International Space Programs, Texts of Executive Agreements, Memoranda of Understanding, and other International Arrangements, 1959--1965. Staff Report prepared for the Committee on Aeronautical and Space Sciences, U. S. Senate, July 20, 1965.
26. Vazquez, Modesto Seara, Cosmic International Law, Trans. by Elaine Malley, Detroit: Wayne State University Press, 1965.
27. Kelsen, Hans, General Theory of Law and State Trans. by Anders Wedberg, New York: Russell & Russell, 1961 ed. (Originally published in 1945).
28. Svarlien, Oscar, An Introduction to the Law of Nations. New York: McGraw-Hill Book Company, Inc., 1955.
29. Haley, Andrew G., and Welf Heinrich, eds. First Colloquium on the Law of Outer Space ~~666~~ The Hague, 1958, Proceedings. Wien, Springer, Verlag, 1959.
30. Haly, Andrew G., and Kurt Grönfors, eds. II International Astronautical Congress, Stockholm, 1960 Proceedings, Vol. III, Third Colloquium on the Law of Outer Space. Stockholm, Sweden: The Organizing Committee of the Congress, 1961.
31. Jenks, C. Wilfred, Space Law. New York: Frederick A. Praeger, Publishers, 1965. (469 pp.)
32. Taubenfeld, Howard J., ed. Space and Society. (Studies for the Seminar on Problems of Outer Space sponsored by the Carnegie Endowment for International Peace.) Dobbs Ferry, New York: Oceana Publications, Inc., 1964. (172 pp.)
33. Haley, Andrew G., and Schwartz, Mortimer D., eds., Proceedings of the Eighth Colloquium on the Law of Outer Space (Sept. 14-15, 1965, Athens, Greece) Norman, Oklahoma, University of Oklahoma Research Institute, 1966.

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|            |   | Vol. 1. |
| 34         | Norris, Martin J., <u>The Law of Seamen</u> , New York: Baker, Voorhis & Co., Inc., 1951.   |         |
| 35         | Norris, Martin J., <u>The Law of Seamen</u> , Vol. 2. New York: Baker, Voorhis & Co., Inc. 1951.  |         |
| 36         | United States Congress, House of Representatives, Committee on Science and Astronautics--Subcommittee on NASA Oversight. <u>Space Flight Emergencies and Space Flight Safety--A Survey</u> . Staff Study prepared for the Subcommittee, 90th Congress, First Session, Serial E, 1967.   |         |
| 37         | Schwartz, Mortimer D., ed. <u>Proceedings of the Ninth Colloquium on the Law of Outer Space</u> . International Institute of Space Law of the International Astronautical Federation. Oct. 14, 1966, Madrid, Spain. Davis, California: The University of California School of Law, 1967.  | FILES   |
| 38         | United States Congress, United States Senate, Committee on Aeronautical and Space Sciences. <u>Soviet Space Programs, 1962-65; Goals and Purposes, Achievements, Plans and International Implications</u> . Staff Report prepared for the Committee, 89th Congress, 2nd Session, December 30, 1966. (esp. Chapter VI "Soviet Attitudes Toward Space Law") | Shelf   |
| 39         | Menter, Martin. "The Developing <del>KNOWLEDGE</del> Law for Outer Space," <u>American Bar Association Journal</u> , Vol. 53, August, 1967, pp. 703-7.  | FILES   |
| 40         | Christol, Carl Q. <del>Space Stations--A Lawyer's Point of View</del><br>"Space Stations: A Lawyer's Point of View", <u>The Indian Journal of International Law</u> , Vol. IV, No. 4, October 1964.   | FILES   |
| 41         | <u>The United States Air Force JAG Law Review</u> "Symposium on The Law of Outer Space" (Special International Law Issue), Vol. VII, No. 5, September-October 1965. [Note: This Law Review may be cited as 7 AF JAG L. Rev. (No. 5), Sep-Oct 65 AFRP 110-1  | FILE    |
|            | a. "Judge Advocates and the Law of Outer Space", Major General Robert W. Manss (The Judge Advocate General, U.S.A.F.) p. 3  |         |
|            | b. "Government Regulation of Space Activities", Brigadier General Martin Menter, USAF, p. 5   |         |
|            | c. "Contiguous Zones in Aerospace--Preventive and Protective Jurisdiction," Professor John Cobb Cooper, p. 15   |         |
|            | d. <del>XXXXX</del> "'Innocent Passage' in the International Law of Outer Space," Professor Carl Q. Christol, p. 22   |         |
|            | e. "Liability for Damages from Space Activities and the Need for Domestic Legislation," Mr. Alfred P. Rubin, p. 30  |         |
|            | f. "Self Defense--A Right in Outer Space," Colonel Hamilton DeSaussure and Lt. Colonel Walter D. Reed, p. 38  |         |

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NO.	TITLE	LOCATION
42.	Dembling, Paul G. and Arons, Daniel M. "Space Law and United Nations: The Work of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space," <u>Journal of Air Law and Commerce</u> Reprinted from Volume 32, No. 3, Summer 1966, Dallas, Texas: Southern Methodist University School of Law	FILES
43.	Dembling, Paul G. and Arons, Daniel M., "The United Nations Celestial Bodies Convention," <u>Journal of Air Law and Commerce</u> Reprinted from Vol. 32, No. 4, Autumn, 1966, Dallas Texas: Southern Methodist University School of Law.	FILES
44.	Kemp, John M. <u>Evolution Toward A Space Treaty: An Historical Analysis</u> , National Aeronautics and Space Administration, HHN-64, NASA Historical Staff, Office of Policy Analysis. Washington, D. C., September 1966. (Comment edition w/revisions)	FILES
45.	Christol, Carl Q., <u>International Law Studies, 1962: The International Law of Outer Space</u> , NAVPERS 15031, Vol. LV, Naval War College, Newport, Rhode Island. U.S.Govt. Printing Office, Washington, D.C., 1966.	BOOKSHELF
46.	Woetzel, Robert K., "International Co-operation in Telecommunication for Educational and Cultural Purposes," from the Proceedings (April, 1967) of The American Society of International Law. Lancaster, Pennsylvania: Lancaster Press, Inc.	FILES
47.	von Braun, Wernher, <u>Space Frontier</u> , New York, Chicago, San Francisco: Holt, Rinehart and Winston, 1963 1963-1967 /Special Consultant, Committee on Aeronautical and Space Sciences, United States Senate,	JPL LIBRARY 629.4 V-2 Cop. 2
48.	Galloway, Eilene, "The Definition of Outer Space". A paper for presentation at a meeting of the Scientific-Legal Liaison Committee of the International Institute of Space Law and the International Academy of Astronautics. XVIIIth Congress of the International Astronautical Federation, Belgrade, Yugoslavia. September 26, 1967.	FILES
49.	Vereshechetin, V. S., Soviet Academy of Sciences, "Scientific and Technical Agreements on Space: Do They Constitute a Source of Space Law?" A paper presented at the Xth Colloquium of the Law of Outer Space, XVIIIth Congress of the International Astronautical Federation, Belgrade, Yugoslavia, Sept. 24-30, 1967.	FILES
50.	Zhukov, Dr. G. P., Soviet Academy of Sciences, "The Problem of the Definition of Outer Space". A paper presented at the meeting of the Scientific-Legal Liaison Committee of the International Institute of Space Law and the International Academy of Astronautics. XVIIIth Congress of the International Astronautical Federation, Belgrade, Yugoslavia. September 26, 1967.	FILES
51.	Zhukov, Dr. G. P., Soviet Academy of Sciences, "The Problem of Legal Status of Scientific Research Stations on the Moon." A paper presented at the Xth Colloquium on the Law of Outer Space, at the XVIIIth Congress of the International Astronautical Federation, September 29, 1967, Belgrade, Yugoslavia.	FILES

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E	NO.	TITLE	LOCATION
	52.	Galloway, Eilene, Special Consultant, Committee on Aeronautical and Space Sciences, United States Senate. "Interpreting the Treaty on Outer Space." A paper for presentation to the Xth Colloquium on the Law of Outer Space, at the XVIIIth Congress of the International Astronautical Federation, September 24-30, 1967. Belgrade, Yugoslavia.	FILES
	53.	Weather Modification Law, Controls, Operations. Report to the Special Commission on Weather Modification, National Science Foundation. Prepared by Dr. Howard J. Taubenfeld, Southern Methodist University School of Law. [JPL Apr. 5, 1968]	<del>RNY</del> FILES
	<del>54</del>	<del>XXXXXXXXXXXXX LAW XXXXXXXXXXXXX 1967, XXXXXXXXXXXXXXXXXXXXXXXXXXXX</del>	
	54	William and Mary Law Review, <u>The Treaty on Rescue and Return of Astronauts AND Space Objects</u> , by Paul G. Dembling and Daniel M. Arons, Volume 9, Spring, 1968 Number <del>xxx</del> 3.	<del>Files</del> FILES
	55	U. S. Congress, <u>Treaty on Outer Space</u> , Hearings before the Committee on Foreign Relations, United States Senate, Ninetieth Congress, First Session on Executive D, 90th Congress, First Session March 7, 13, and April 12, 1967	FILES
	<del>56</del>	Staff Report, Prepared for the Use of the Committee on Aeronautical and Space Sciences, United States Senate, <u>Agreement on the Rescue of Astronauts, The Return of Astronauts and the Return of Objects Launched into Outer Space, Analysis and Background Data</u> , July 16, 1968	FILES
	57	<u>Journal of Air Law and Commerce</u> , "The Evolution of the Outer Space Treaty," By Paul G. Dembling and Daniel M. Arons, Reprinted from Vol. 33, No. 3, (Summer 1967)	FILES
	58	Don E. Kash, <u>The Politics of Space Cooperation</u> , Purdue University Studies 1967 by Purdue Research Foundation, Library of Congress Catalog No. 67-64072	Library
	59	NASA MSC Internal Note No. 67-FM-44, 10 April 1967, COLLISION PROBABILITY OF THE APOLLO SPACECRAFT WITH OBJECTS IN EARTH ORBIT, Prepared by Florida Operations, TRW Systems, Manned Spacecraft Center, Houston, Texas.	FILES
	60	"Why Space Stations?" by Robert R. Gilruth, Director NASA Manned spacecraft Center, in <u>Astronautics &amp; Aeronautics</u> , November 1968	Library
	61	"The Pollution of Space," Bernard Lovell, <u>Bulletin of Atomic Scientists</u> , December 1968	Files
	62	"An International Law of Science: Orders on Man's Expanding Frontiers," Bulletin of the Atomic Scientists, December 1968	"



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<u>No.</u>	<u>Title</u>	<u>Location</u>
63	<u>Human Rights in Outer Space</u> , by Carl Q. Christol	Files
64	<u>Space Observations and Earth Resource Studies</u> , by William A. Fischer AIAA Paper No. 67-764, AIAA 4th Annual Mtg. & Technical Display, Anaheim, Calif. Oct. 23-27, 1967	"
65	<u>The Potential of Lunar Resources</u> , by Peter E. Glaser, AIAA Paper No. 67-876, AIAA 4th Annual Mtg.	"
66	<u>International Organization for Aerospace</u> , by John R. Tamm, AIAA No. 68-906, Impact of Aerospace Science and Technology on Law and Government Conference, Washington, D.C. Aug. 28-30, 1968	"
67	<u>Development of Legal Regimes to Guide Space Exploration</u> , by Edward Miles, AIAA Paper No. 68-908, Impact of (see above)	"
68	<u>A Comparison of Priorities in National and International Aerospace Planning</u> , by Robert K. Woetzel, AIAA Paper No. 68-913, Impact (above)	"
69	<u>Legal Aspects of the Use of Satellites in Discovering and Exploiting Earth Resources</u> , by Howard J. Taubenfeld, AIAA Paper No. 68-921, Impact of (see above)	"
70	<u>Some Geopolitical Factors Surrounding Navigation Satellites</u> , by Edgar S. Keats, AIAA Paper No. 67-960, AIAA 4th Annual Meeting & Technical Display, Anaheim, Calif. Oct. 23-27, 1967	"
71	<u>Exploiting the Resources of the Moon: An Overview</u> , by Alfred M. Mayo, AIAA Paper No. 67-872, AIAA 4th Annual (see above)	"
72	<u>Space Science and Technology: Benefits to Developing Countries</u> , The United Nations Conference on the Exploration and Peaceful Uses of Outer Space, Vienna, 14-27 August 1968.	"
73a	"Not So Empty Space," <u>Vectors</u> , Vol. XI, No. 1, First Quarter 1969 Hughes Aircraft Co.	"
73b	Brig. Gen. Martin Menter, "Extending Law to Outer Space," <u>Vectors</u> , Vol. XI, No. 1, First Quarter, 1969, Hughes Aircraft Co.	"
74	Rita F. Taubenfeld and Howard J. Taubenfeld, "The International Implications of Weather Modification, <u>Bulletin of the Atomic Scientists</u> , January 1969.	"
75	G.E. Perry, "Reconnaissance Aspects of 8-day Cosmos Satellites?" <u>Spaceflight</u> , Vol 10, June 1968.	"
76	Kenneth W. Gatland, "Espionage from Orbit," Part 1, <u>Flight International</u> 10 April 1969	"

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<u>NO.</u>	<u>TITLE</u>	<u>LOCATION</u>
77	Kenneth W. Gatland, "Espionage from Orbit," Part Two <u>Flight International</u> , Files 17 April 1969	
78	"Snoopy's Brothers," <u>Nature</u> , Vol. 222, June 7, 1969, [Recon. & Earth Resources Tech. Satellites].	"
79	Eilene Galloway, "Delimitation of Airspace from Outer Space," A paper for presentation at the World Peace through Law Conference, Bangkok, Thailand, Sept. 7-12, 1969.	"
80	Amrom H. Katz, "net Aircraft Make Earth-resource Surveys, <u>Astronautics &amp; Aeronautics</u> , June 1969	"
<del>XXX</del> 81	Amrom H. Katz, "Observation Satellites: Problems and Prospects," reprinted from <u>Astronautics</u> , April, June, July, August, Sept., Oct., 1960.	"
82	Merton E. Davis, "Big Potential for Small Observation Satellites," reprinted from <u>Astronautics and Aeronautics</u> , June 1967	
83	"No Room in the Orbit," <u>Nature</u> , Vol. 223, Aug. 16, 1969	"
84	NASA Literature Search No. 8415, <u>Space Law and International Agreements</u> April 4, 1969 FF No. 862 Rev. Sept. 67 (Library No. 174165-1) (Ret. to Library 9/18/69)	Shelf
<del>XX</del> 85	Gennadi Zhukov, "The Legal Status of the Moon," <u>Soviet Life</u> , Aug. 1969	File
86	<u>Proceedings of the 11th Colloquium on the Law of Outer Space</u> , IISL of the IAF, Oct. 17-18, 1968	Shelf
87	S. Gorove, "Legal Problems of the Rescue and Return of Astronauts, <u>The International Lawyer</u> , Vol. 3, No. 4, 1969	Files
88	S. Gorove, "Interpreting Article II of the Outer Space Treaty."	"
89a	Letter dated 29 Sept. 1969 from J.D. Burke to D.L. Roberts of Illinois Institute of Technology Research Institute enclosing article for inclusion in the FY71 Program Memo drafts.	"
89b	Memo for above dated Sept. 29, 1969, entitled, "International Aspects of Lunar Exploration in the NASA Integrated Program."	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
90	John R. Tamm, "Report on Space Law Opinion," presented at Mar del Plata Argentina, October 1969.	Files
91	Philip M. Smith, "Prospects for International Cooperation On the Moon: The Antarctic Analogy," <u>Bulletin of the Atomic Scientists</u> , Sept. 1969, Vol. 25, No. 7.	"
<del>92</del> 92	James H. Winchester, "How We'll Answer an SOS from Space," <u>Science Digest</u> September 1963	"
93	R. Cargill Hall, "A Position Summary, LMSC and the International Legal Problems in Space Exploration," LMSC-A704541, 16 Sept. 1964	"
94	"Relay 1 Refuses to Stop Operating, <u>Space World</u> , Vol. A-5, March 1964	"
95	Maj. William A. Cohen, USAF, "Finding your Way in Space," <u>Air Force and Space Digest</u> , Aug. 1965.	"
96	R. Cargill Hall, "The International Legal Problems in Space Exploration, a Review," Jan. 1964, Mx LMSC, Sunnyvale, Calif.	"
97	Dr. D. Goedhuis, "Reflections on the Evolution of Space Law," <u>Netherlands International Law Review</u> , 1966	"
98	Space Law Committee Report from the International Law Association, Helsinki Conference (1966)	"
99	<u>The JAG Journal</u> , March-April 1960, LCDR F.J. Flynn, "Precedent <sup>for</sup> <del>of</del> the Law Of Outer Space.	"
100	Robert D. Crane, "Basic Principles in Soviet Space Law: Peaceful Coexistence," Peaceful Cooperation, and Disarmament, reprinted from the symposium on The Soviet Impact on International Law, published as the Autumn, 1964 issue of <u>Law and Contemporary Problems</u> , Duke U School of Law, Durham, N.C.	"
101	"Is U.N. Satellite Surveillance Practical?" SPACE AGE NEWS, Sept. 1963	"
102	Editorial from <u>The Monitor</u> , July 29, 1965, "Christians on Mars?"	"
103	Science page from <u>Time</u> , Aug. 16, 1968	"
104	"Khrushchev Letter on Space Cooperation, <u>N.Y. Times</u> , Mar. 22, 1962	"
105	Document addressed to AFSC <del>from</del> Subject: Requirement for On-Off Telecommand Capability in Spacecraft," dated 26 Mar. 1965.	"
106	Handwritten document, no date, Designation: SS-496L, Space Det. & Tracking Sys.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
107	Document dated 1 Feb. 1960, no name , AFM 100-11	Files
108a	Letter dated Dec. 18, 1961 from H.M. Estes, Jr., Deputy Cmdr AFSC for Aerospace Systems to various agencies directing them to comply with the attached policies.	"
108b	Document dated Nov. 1961, "Statement of the President on Communication Satellite Policy."	"
108c.	Document dated Nov. 30, 1961 from W.E. Leonard, Brig. Gen. USAF to various elements of his command to comply with the policies.	"
108d	Document about Nov. 1961 from Paul D. Miles, Executive=Secretary of the Interdepartment Radio Advisory Committee of the Executive Office of the President, Office of Civil and Defense Mobilization.	"
109	George J. Alexander, "The Legal Frontier in the U S Space Program," <u>Syracuse Law Review</u> , Vol. 20, No. 4, Summer 1969 (Domestic Law), [Liability for damage, resource satellite application, etc.]	"
110	Gloria W. Heath, "Space Rescue: Requirements for Recovery of Astronauts Returning under Contingency Conditions, presented at XXth Congress of the IAF 5 to 12 Oct. 1969, Mar del Plata, Argentina	"
111	AIAA Paper 67-825 Stephen H. Dole of Rand, "Contingency Planning for Space-Flight Emergencies, presented at Anaheim Oct. 23-27, 1967, AIAA 4th Annual Meeting.	"
112	J.E.S. Faucett, <u>International Law and the Uses of Outer Space</u> , Manchester Library University Press, 1968	"
113	Carl Q. Christol, "Human Rights in Outer Space," Impact of Aerospace Science Files and Technology on Law and Government Conference, Washington D.C. Aug. 28-30, 1968. [AIAA Paper 68-910]	"
114	Carl Q. Christol, "Liability for Damage Caused by the Launching of Objects into Outer Space, presented to the International Law Section, L.A. County Bar Association, Feb. 18, 1970	"
115	Bibliography, Space Rescue, from <u>Astronautica Acta</u> , Dec. 1969, Vol. <del>15</del> 15 No. 2, pp 126-127.	"
116	Statement of Dr. Paine, NASA before the Committee on Aeronautical and Space Sciences, U.S. Senate, Mar. 11, 1970 with attachments: (a) International Program Summary, (b) Cooperative International Aeronautics REsearch, (c) Third Country Space Activity, (d) India-US Instructional TV Experiment, (e) US/USSR Cooperation in Space REsearch.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
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p. 1591 Cortright <sup>March 11</sup>

Nasa announced Friday (8<sup>th</sup>) that it was contracting with the Northrop Corp to provide assistance to the JPL on the Ranger Project.

p. 1595 Newell & Cortright personally not feel Karch on Friday, asked to talk about it on Monday

unload lab after 1964 of need to produce carbon copy spacecraft

p. 1601- Cortright Nasa criticized for waiting so long to bring in a contractor

Cost plus fixed fee  
\$2 million for phase 1

## BOOK LIST #2

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73.	United States Congress, House of Representatives, Subcommittee on Advanced Research and Technology of the Committee on Science and Astronautics, <u>1963 NASA Authorization</u> , [No. 2], Part 3, 87th Congress, Second Session on H.R. 10100 (Superseded by H.R. 11737), March 7, 8, 13, 14, 15, 16, 20, 23, 27, 28, 29, and April 3, 1962. U.S.Govt. Printing Office, Washington, D.C., 1962.	R.R.WILFOR
74.	United States Congress, House of Representatives, Subcommittee on Space Sciences of the Committee on Science and Astronautics, Hearings before the Subcommittee, <u>1963 NASA Authorization</u> , [No. 2], Part 4, 87th Congress, Second Session on H.R. 10100 (Superseded by H.R. 11737), March 6, 7, 8, 13, 19, and 20, 1962. U.S.Govt. Printing Office, Washington, D.C. 1962.	R.R.WILFORD
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76.	United States Congress, House of Representatives, Committee on Science and Astronautics and Subcommittees Nos. 1, 2, 3, and 4, Hearings before the Committee and Subcommittees, <u>1960 NASA Authorization</u> , [No. 17], 86th Congress, First Session on H.R. 6512, April 20, 21, 22, 24, 27, 29, and May 4, 1959, U.S.Govt. Printing Office, Washington, D. C., 1959.	R.R.WILFORD

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| 77.   | United States Congress, Senate, Committee on Aeronautical and Space Sciences, Hearings before the Committee, <u>NASA Authorization for Fiscal Year 1965</u> , Part 1, <u>Scientific and Technical Programs</u> , 88th Congress, Second Session on S. 2446, March 4, 1964. U.S. Govt. Printing Office, Washington, D.C. 1964   | R.R.WILFOR |
| 78.   | United States Congress, Senate, Committee on Aeronautical and Space Sciences, Hearings before the Committee, <u>NASA Authorization for Fiscal Year 1965</u> , Part 2, <u>Program Detail</u> , 88th Congress, Second Session on S. 2446, March 4, 5, 6, 9, 16, 17, and 18, 1964. U.S. Govt Printing Office, Washington, D. C., 1964.   | R.R.WILFOR |
| 79.   | United States Congress, House of Representatives, Committee on Science and Astronautics, Hearings before the Committee, <u>1965 NASA Authorization</u> , [No. 1] Part 1, 88th Congress, Second Session on H.R. 9641, February 4, 5, 6, and 7, 1964 U.S.Govt. Printing Office, Washington, D.C., 1964.   | R.R.WILFOR |
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| 82.   | United States Congress, House of Representatives, Committee on Science and Astronautics, Subcommittee on Advanced Research and Technology, Hearings before the Subcommittee, <u>1965 NASA Authorization</u> , [No. 1] Part 4, 88th Congress, Second Session on H.R. 9641 (Superseded by H.R. 10456) February 18, 19, 20, 21, 24, 25, 26, 27; March 2, 3, 4, 5, 1964. U.S.Govt. Printing Office, Washington, D. C. 1964. | R.R.WILFOR |
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86.	United States Congress, House of Representatives, Committee on Appropriations, Subcommittee of the Committee, Hearings before a Subcommittee, <u>Independent Offices Appropriations for 1966</u> , Part 2, 89th Congress, First Session. U.S. Govt. Printing Office, Washington, D.C. 1965.	R.R.WILFOR
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88.	United States Congress, House of Representatives, Committee on Science and Astronautics, Hearings before the Committee, <u>1967 NASA Authorization</u> , [No. 4], Part 1, 89th Congress, Second Session on H.R. 12718 (Superseded by H.R. 14324), March 10, 11, and 22, 1966, U.S. Govt. Printing Office, Washington, D. C. 1966	R.R.WILFOR
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91.	United States Congress, House of Representatives, Committee on Government Operations, Thirteenth Report by the Committee, House Report No. 445, Union Calendar No. 204, <u>Government Operations in Space (Analysis of Civil-Military Roles and Relationships)</u> , 89th Congress, 1st Session, June 4, 1965. U.S. Govt. Printing Office, Washington, D. C. 1965.	R. R. WILFORD FILES ↓
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94.	United States Congress, House of Representatives, Committee on Science and Astronautics, Hearings before the Committee, <u>Review of the Space Program, [No. 3], Part 2</u> , 86th Congress, Second Session, February 8, 9, 15, 16, 17, and 18, 1960. U.S.Govt. Printing Office, Washington, D.C. 1960.	BOOKSHELF
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96.	<u>Space Programs Summary No. 37-11, Volume 1</u> , for the period July 1, 1961 to September 1, 1961. Pasadena: Jet Propulsion Laboratory, Oct. 1, 1961 (UNC)	JPL LIBRARY
97.	<u>Space Programs Summary No. 37-12, Volume 1</u> , for the period Sept. 1, 1961 to Nov. 1, 1961. Pasadena: Jet Propulsion Laboratory, Dec. 1, 1961 (UNC)	JPL LIBRARY
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100.	United States Congress, Senate, Committee on Aeronautical and Space Sciences, NASA Authorization Subcommittee, Hearings before the Subcommittee, <u>NASA Authorization for Fiscal Year 1960, Part I, Scientific and Technical Presentations</u> , 86th Congress, First Session on S. 1582, April 7, 8, 9, and 10, 1959. U.S.Govt Printing Office, Washington, D. C. 1959.	<i>Same as 61</i> <del>BOOKSHELF</del>
101.	United States Congress, Senate, Committee on Aeronautical and Space Sciences, NASA Authorization Subcommittee, Hearings before the Subcommittee, <u>NASA Authorization for Fiscal Year 1960, Part II, Program Detail for Fiscal Year 1960</u> , 86th Congress, First Session on S. 1582 and H.R. 7007, May 21, 1959. U.S.Govt. Printing Office, Washington, D. C. 1959	<i>Glenn Cochran</i> <del>BOOKSHELF</del>
102.	National Aeronautics and Space Administration, <u>13th Semiannual Report to Congress</u> , January 1 - June 30, 1965. U.S.Govt Printing Office, Washington, D. C. 1966.	<i>Shell</i> <del>BOOKSHELF</del>

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103.	United States Congress, House of Representatives, Committee on Science and Astronautics, Report of the Committee, <u>Centaur Launch Vehicle Development Program</u> , Serial Q, 87th Congress, Second Session, July 2, 1962. U.S. Govt. Printing Office, Washington, D.C. 1962	BOOKSHELF
104.	National Aeronautics and Space Administration, Office of Technology Utilization, Scientific and Technical Information Division, Swenson, Loyd S., JR., Grimwood, James M., Alexander, Charles C. <u>This New Ocean: A History of Project Mercury</u> , The NASA Historical Series, NASA SP-4201. U.S. Govt. Printing Office, Washington, D.C. 1966.	BOOKSHELF
105.	Jet Propulsion Laboratory, California Institute of Technology, <u>Performance History of Unmanned Fully Attitude Stabilized Spacecraft Projects During the 1960's</u> , Issue No. 3, June 16, 1967. Pasadena, California, 1967.	FILES <del>BOOKSHELF</del>
106.	United States Congress, House of Representatives, Committee on Science and Astronautics, Subcommittee on Space Sciences, Hearings before the Subcommittee, <u>Centaur Program</u> , [No. 4], 87th Congress, Second Session, May 15 and 18, 1962. U.S. Govt. Printing Office, Washington, D.C. 1962.	BOOKSHELF
107.	Lockheed Aircraft Corporation, Lockheed Missiles & Space Company, NASA Agena Engineering Systems Integration, <u>Agena History and Performance Summary, Task 35</u> . SSD-3805-11-1, LMSC-A794349. Sunnyvale, California: January 31, 1966.	FILES
	Jet Propulsion Laboratory, California Institute of Technology, <u>Space Explorers</u> Pasadena, California: Jet Propulsion Laboratory, July, 1958.	FILES
109.	Jet Propulsion Laboratory, photograph No. G-61757, "Lunar Program Summary" (drawings of spacecraft and their launch vehicles) (Ranger, Surveyor, Prospector)	FILES
110.	Sartwell, Frank, "Robots to the Moon," <u>National Geographic Magazine</u> , October 1962, pp. 557-570.	FILES
111.	Rittenhouse, J. B., L. D. Jaffe, R. G. Nagler, and H. E. Martens, Jet Propulsion Laboratory, California Institute of Technology, "Results of Ranger I Flight Friction Experiment," <u>AIAA Journal</u> , Vol. 1, No. 8, August, 1963, pp. 1913-1916.	FILES
112.	United States Congress, House of Representatives, Committee on Science and Astronautics, Report of the Committee, <u>Army Lunar Construction and Mapping Program</u> , 86th Congress, Second Session, Serial f, Union Calendar No. 852, House Report No. 1931. <del>XXXX</del> , June 22, 1960. Washington, D. C.: U.S. Govt Printing Office, 1960.	FILES
113.	Miscellaneous newspaper clippings re Ranger 6 failure and impact at JPL	FILES

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114.	<u>Ranger Master Slide File</u> , (Frank Bristow, Book #4, Updating: 2-22-65)	FILES
115.	<u>The Griffith Observer</u> , Vol. XXIII, No. 2, February, 1959 ( <i>Pioneer III</i> )	FILES
116.	Jim Burke's partial rewrite of <u>Ranger Final Report, Part I.</u> <sup>Project History</sup> <del>Engineering</del>	FILES
117.	National Aeronautics and Space Administration, <sup>Office of Public Information,</sup> Jet Propulsion Laboratory, <u>Ranger VII: A Special Report</u> , August 5, 1964./ Washington: GPO, 1964.	FILES
118.	National Aeronautics and Space Administration, Office of Space Sciences, Homer E. Newell, Director, <u>The Mission of Man In Space</u> , Washington: GPO, 1963.	FILES
119.	<del>Ranger Final Report, Part II, Spacecraft System</del> ( <i>See 2-122 Set</i> )	FILES
<del>XXX</del> 120.	Jet Propulsion Laboratory, John R. Scull, <u>A System for Lunar Photography and Data Transmission</u> , May 28, 1960, Technical Release No. 34-142./ Pasadena: May 28, 1960.	<del>JIM WILSON</del> (OR FILES)
121.	Jet Propulsion Laboratory, Raymond L. Heacock, <u>Ranger: Its Mission and Its Results</u> . Reprinted from <u>Space Log</u> , Summer, 1965. Redondo Beach, California: TRW Systems.	FILES
	<del>Rough draft of Ranger Final Report (partial)</del> <i>Scull TR-34-142</i> <i>A system for lunar photog</i>	FILES
123.	National Aeronautics and Space Administration, <u>Space Tracking: Fifth Anniversary</u> (International Tracking of Space Vehicles), Anniversary program, Jan. 31, 1963.	FILES
124.	<u>Space Programs Summary No. 37-10, Volume II</u> , for the period May 1, 1961 to July 1, 1961. Pasadena: Jet Propulsion Laboratory, August 1, 1961. CONF	C.D.C.
125.	<u>Space Programs Summary No. 37-11, Volume II</u> , for the period July 1, 1961, to Sept. 1, 1961. Pasadena: Jet Propulsion Laboratory, Oct. 1, 1961, CONF	C.D.C.
126.	<u>Space Programs Summary No. 37-12, Volume II</u> , for the period Sept. 1, 1961 to Nov. 1, 1961. Pasadena: Jet Propulsion Laboratory, Dec. 1, 1961, CONF	C.D.C.
127.	<u>Space Programs Summary No. 37-13, Volume II</u> , for the period Nov. 1, 1961 to Jan. 1, 1962. Pasadena: Jet Propulsion Laboratory, Feb. 1, 1962, CONF	C.D.C.
128.	<u>Space Programs Summary No. 37-14, Volume II(U)</u> , for the period Jan. 1, 1962 to March 1, 1962. Pasadena: Jet Propulsion Laboratory, April 1, 1962, CONF	C.D.C.
129.	<u>Space Programs Summary No. 37-15, Vol. I</u> , for the period March 1, 1962 to May 1, 1962. Pasadena: Jet Propulsion Laboratory, May 31, 1962. CONF	C.D.C.
130.	<u>Space Programs Summary No. 37-16, Vol. I</u> , for the period May 1, 1962 to July 1, 1962. Pasadena: Jet Propulsion Laboratory, July 31, 1962, CONF	C.D.C.

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131.	<u>Space Programs Summary No. 37-15, Vol. III, for the period March 1, 1962 to May 1, 1962. Pasadena: Jet Propulsion Laboratory, May 31, 1962. UNC</u>	<del>LIBRARY</del> <i>Shelf</i>
132.	<u>Space Programs Summary No. 37-15, Vol. VI, for the period March 1, 1962 to <del>MAYXX</del> June 1, 1962. Pasa: Jet Propulsion Laboratory, June 30, 1962. UNC</u>	<i>Libra</i>
133.	<u>Space Programs Summary No. 37-16, Vol. VI, for the period May 1, 1962 to August 1, 1962. Pasadena: Jet Propulsion Laboratory, August 31, 1962 UNC</u>	"
134.	<u>Space Programs Summary No. 37-17, Vol. III, for the period July 1, 1962 to Sept. 1, 1962. Pasadena: Jet Propulsion Laboratory, October 1, 1962 UNC</u>	"
135.	<u>Space Programs Summary No. 37-17, Vol. VI, for the period July 1, 1962 to Oct. 1, 1962. Pasadena: Jet Propulsion Laboratory, October 31, 1962 UNC</u>	"
136.	<u>Space Programs Summary No. 37-18, Vol. III, for the period Sept. 1, 1962 to Nov. 1, 1962. Pasadena: Jet Propulsion Laboratory, November 30, 1962 UNC</u>	"
137.	<u>Space Programs Summary No. 37-18, Vol. VI, for the period Sept. 1, 1962 to Dec. 1, 1962. Pasadena: Jet uPropulsion Laboratory, December 31, 1962 UNC</u>	"
138.	<u>Space Programs Summary No. 37-19, Vol. III, for the period Nov. 1, 1962 to Dec. 31, 1962. Pasadena: Jet Propulsion Laboratory, January 31, 1963 UNC</u>	"
139.	<u>Space Programs Summary No. 37-19, Vol. VI, for the period Nov. 1, 1962 to Jan. 31, 1963. Pasadena: Jet Propulsion Laboratory, February 28, 1963 UNC</u>	"
140.	<u>Space Programs Summary No. 37-16, Vol. III, for the period May 1, 1962 to July 1, 1962. Pasadena: Jet Propulsion Laboratory, July 31, 1962.</u>	<i>Shelf</i>
141.	<u>DSN Facility Activation Dates, chart, author &amp; date unknown, denoting DSIF facilities pertinent dates from inception, covers Mreh-- <del>March, 1968</del> <del>thru December, 1962</del>. <i>Approx. April 1967</i></u>	FILES
142.	<u><i>COMPILES</i> "Council Compiles List of Space 'Firsts'", Aviation Week &amp; Space Technology, May 16, 1966, p. 100.</u>	FILES
143.	<u>Letter from NASA, Oran W. Nicks, to JPL, Harris M. Schurmeier, Feb 26, 1965. [Congratulations on Ranger VIII mission excellence.]</u>	FILES
144.	<u>Telegram from Gerard P. Kuiper to Homer E. Newell, NASA, Feb. (23?, 28?), 1965. <del>{Sat</del> [States having identified causes of lunar depressions from Ranger VII and Ranger VIII photographs].</u>	"
145.	<u>Teletype from Homer E. Newell to W. H. Pickering, et.al.,, Feb. 1, 1965. 1:15 pm Invitation to meeting at NASA, Feb. 6, 1965 to discuss issues and select target sites for Ranger 8.</u>	"
146.	a. Letter from A. Capell, Univ. of Sydney, to R. A. Leslie, Station Director, D.S.I.F. 42. Nov. 15, 1963 b. Letter from R. A. Leslie, D.S.I.F. 42, to E. Rechtin, JPL, approx. Nov. 20, 1963 c. Letter from E. Rechtin, JPL, to R. A. Leslie, DSIF 42, Adelaide, Australia, Nov. 27, 1963. [titles for DSIF sites near Canberra, and historical origins of name Tidbinbilla]	"

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147.	a. Letter from R. K. Pefley, Univ. of Santa Clara to the President of the U.S., Sept 2, 1965. [decries curtailment (proposed) of in-house unmanned spacecraft projects at JPL, and commends JPL from personal experience in several areas] b. Letter from Homer E. Newell, NASA to R. K. Pefley, Univ. of Santa Clara Oct. 4, 1965. [Concurs; cites Surveyor & Voyager; states NASA intention to continue to support programs at JPL].	FILES
148.	Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL 28 Dec., 1965. [Holiday greetings; commendations for Ranger and Mariner success]	"
149.	Letter from E. M. Cortright, NASA, to W. H. Pickering, R. J. Parks, and E. M. Schurmeier, JPL, February 5, 1964 and enclosing copy of editorial regarding Ranger 6 from the <u>Washington Evening Star</u> . [Notes progress made since Ranger 5 and pledges to work closely with JPL for ultimate success, in spite of failure of Ranger 6 TV subsystem.]	"
150.	Telegram from Julian Scheer, (Code AF), NASA TO W. H. Pickering & Frank Collela, JPL, February 6, 1964. [Cites news story on wires this date saying Apollo group has requested extra Apollo flight reconnaissance flight in view of repeated failures of U.S. moon probes, and that officials at NASA's MSC are considering extra flight. Story broke less than 1 week after Ranger 6 failure. NASA refutes story. Gilruth to issue denial this date.]	"
	Telegram from W. H. Pickering, JPL to NASA, Homer E. Newell and E. M. Cortright. Feb. 11, 1964. [Cause of RA-VI failure not yet determined; requests rescheduling of launch dates for Ranger 7, 8, and 9.].	"
152.	Letter from H. M. Schurmeier, JPL, to N. W. Cunningham, NASA, Feb. 18, 1964. [Summary of buy-off of RA-7 spacecraft held on January 24th prior to shipping to AMR].	"
153.	Letter from Richard E. Horner, Northrop Space Laboratories, to Homer E. Newell, NASA, March 10, 1964 w/2 enclosures: 1. Phasing chart of the proposed activity, and Time-phased curve of estimated expenditures and fund commitment requirements. [Proposal for fabrication, assembly, test, delivery and operational support of four Ranger Spacecraft essentially identical to Block III spacecraft, during 1-year gap between completion of Ranger Block III flights and scheduled Surveyor and Lunar Orbiter.]	"
154.	Telegram from Robert C. Seamans, NASA to Dr. Arnold Beckman, C.I.T., and W. H. Pickering, JPL. March 31, 1964. [Quotes letter this date from James E. Webb to Hon. Clinton P. Anderson and Hon. George P. Miller. Letter cites failure of Ranger 6 TV cameras to turn on at proper time, establishment of Ranger 6 Review Board, possible causes of failure, several deficiencies in design and construction, and corrective actions which NASA is considering to improve probability of success on Ranger 7.] Also cites success of launch, midcourse, DSN, and terminal. Report by the Ranger 6 Review Board will not be released to the public, at the present time.]	"
155.	Telegram from H. M. Schurmeier, JPL, to N. W. Cunningham, NASA June 11, 1964. Subject: Bag of Hardware Incident.	"
156.	Letter from H. M. Schurmeier, JPL to N. W. Cunningham, NASA. June 22, 1964. [Documents conclusions and recommendations at Ranger Buy-Off Meeting held at JPL on June 15 and 16, 1964 for Ranger B spacecraft.]	"



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.	Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL, June 17, 1964. [Authorization to ship Ranger B spacecraft to Cape Kennedy, and discussion of final buyoff meeting near launch date.]	FILES
158.	Letter from W. H. Pickering, JPL, to Homer E. Newell, NASA, May 22, 1964. [In response to request for a comprehensive reply to the "Final Report of the Ranger 6 Review Board."]	"
159.	a. Letter from E. M. Cortright, NASA to W. H. Pickering, JPL June 25, 1964. including two enclosures and requesting answers to the charges made in letters (b) and (c) below. b. Letter enclosed with (a) above from Wayne Hollman, former JPL employee, to Mr. Koppenhaver, NASA, carbon copy to James Webb, April 28, 1964. [accusing JPL of laxity and negligence in Quality Assurance Dept.] c. Letter enclosed with (a) above from R. B. Dugan, former JPL employee, to James E. Webb, NASA, February 12, 1964. [accusing JPL of problems in area of disciplines and of philosophy].	"
160.	Letter from W. H. Pickering, JPL, to E. M. Cortright, NASA, July 13, 1964. [Subject: NASA Tracking Support of Ranger and Mariner Launches]	"
161.	Letter from W. H. Pickering, JPL, to Homer E. Newell, NASA, July 16, 1964. [Regarding Ranger B launch readiness and quantitative estimate of the realistic probability of success].	"
162.	a. Letter from Robert E. Rodney, NASA/WOO to V. C. Larsen, Jr. , JPL, July 5, 1962. Subject: R&D Task Orders - Manpower b. Letter from V. C. Larsen, Jr., JPL to R. E. Rodney, NASA/WOO, July 12, 1962. Subject: R&D Task Orders - Manpower c. Letter from Robert E. Seamans, Jr., NASA, to W. H. Pickering, JPL, July 16, 1964. [Task Order problems.]	"
163.	Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL, July 28, 1964. [JPL position on the "Final Report of the Ranger VI Review Board" and comments on Ranger B Buy-Off Meeting on June 15 and 16. Concurrence with JPL recommendation to ship Ranger B to Cape.]	"
164.	Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL July 28, 1964. [Views regarding JPL operations and the working relationships between JPL and <del>OSSS</del> OSA].	"
165.	Letter from E. M. Cortright, NASA, to Harris M. Schurmeier, JPL, Aug. 6, 1964 Congratulations on Ranger 7 success.	"
166.	Teletype from R. R. Wilford, JPL, to S. D. Cianella, NASA, August 21, 1964. [Crediting Mr. Wolfe with responsibility for Ranger spacecraft and ultimate success of Ranger VII, statement by Dr. W. H. Pickering]	"
167.	Letter from Gerard P. Kuiper to Mr. Oran Nicks, NASA, August 22, 1964. [Proposal of name "Mare Cognitum" for the impact area of Ranger VII.	"
.	Letter from Robert W. Carder, Aeronautical Chart and Information Center, USAF, to Dr. Gerard P. Kuiper, Univ. of Arizona, August 19, 1964. [Ranger 7 photography].	"

## BOOK LIST #2

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NO.	TITLE	LOCATION
169.	Letter from Edmond C. Buckley, NASA to W. H. Pickering, JPL, and Dr. Harry J. Goett, GSFC, August 24, 1964. [Subject: Reliability and Quality Assurance for Tracking and Data Acquisition Facilities].	FILES
170.	NASA Announcement, September 1, 1964. Announcement No. 64-190. Subject: Appointment of General William F. McKee as Assistant Administrator for Management Development.	"
171.	Letter from Oran W. Nicks, NASA, to W. H. Pickering, JPL, Sept. 29, 1964. [Congratulations on success of Ranger VII, and importance of success of Rangers 8 and 9].	"
172.	"NASA Briefing for the President of the United States" (Taken from tape recording) Saturday, August 1, 1964, NASA News release. [Discussion between the PRESIDENT, Dr. Newell and Dr. Pickering regarding details of Ranger VII success].	"
173.	NASA News Release, August 28, 1964, 2:00 p.m. <u>Interim Scientific Results Conference, Ranger VII.</u> [Pickering briefs President, August 1, 1964].	"
174.	Letter from Newton W. Cunningham, NASA to Harris M. Schurmeier, JPL, November 9, 1964. [Review of Ranger 8 and 9 operations and test plan].	"
175.	Teletype from Homer E. Newell, NASA, to W. H. Pickering, JPL, Dec. 1, 1964. [Management responsibility for SFOF transferred from OSSA to OTDA].	"
176.	Letter from Raymond L. Bisplinghoff, NASA, to W. H. Pickering, JPL, Dec. 1, 1964. [Comments on potential improvements in JPL operations and working relationships with NASA].	"
177.	Letter from Edgar M. Cortright, NASA, to W. H. Pickering, JPL, Dec. 2, 1964. [Subject: Trends in Program Management].	"
178.	Attachment to Memo from Luedecke to Parks re new letter "Trends in Program Management"; Dec. 2, 1964. JPL Change Control Experience, Jan. 19, 1965. (see 2-177 above).	"
179.	a. Letter from Oran W. Nicks, NASA, to R. J. Parks, JPL, with enclosures (b), (c), and (d), May 17, 1963. [Sterilization of Ranger spacecraft and enclosures of Congressional questions and answers of same]. b. (1963) "Questions to be answered for Congressional Record", includes list of persons working on sterilization problems. c. Extract of Testimony by Dr. Newell, April 24, 1963, on subject of sterilization. d. Testimony by Oran W. Nicks on subject of sterilization	"
180.	Letter from Homer Newell, NASA, to Dr. Pickering, JPL, April 26, 1963. [Proposed experiments for Ranger Block IV missions; tentative approval of experiments and principal investigators for Rangers 10, 11, and 12.].	"
181.	Letter from R. J. Parks, JPL to Oran W. Nicks, NASA, April 24, 1963. [Subject: Terminal Sterilization of Ranger Spacecraft].	"

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BOOK NO.	TITLE	LOCATION
182.	Letter from Newton W. Cunningham, NASA, to Harris M. Schurmeier, JPL, March 18, 1963. [Review and objectives of Ranger Blocks III and IV] <i>(see also 670, 731, 309)</i>	FILES
183.	Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL, March 8, 1963. [confirmation establishing the Northrop Corporation as Ranger spacecraft system contractor].	"
184.	(a) Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL, February 28, 1963. <del>XXX</del> [Eliminates all experiments except TV from 1963 Ranger missions. Enclosed letters (b) and (c) below to JPL experimenters]. (b) Letter from Homer E. Newell, NASA to Dr. E. J. Smith, JPL Feb. 28, 1963. (c) Letter from Homer E. Newell, NASA to Dr. H. R. Anderson, JPL with carbon copy to Dr. W. S. McDonald, JPL, Feb. 28, 1963.	"
185.	(a) Letter from W. H. Pickering, JPL, to E. M. Cortright, NASA, February 20, 1963. [Enclosure and discussion of proposed procurement plan for bringing an industrial contractor into the Ranger Program]. b. Procurement Plan, February 20, 1963.	"
186.	Letter from Albert J. Kelley, Chairman, Ranger Board of Inquiry, NASA, to W. H. Pickering, JPL, January 31, 1963. [Letter of thanks for cooperation of JPL during inquiry].	"
187.	Letter from James T. Koppenhaver, Reliability & Quality Assurance, NASA, to W. H. Pickering, JPL, January 8, 1963. [Submittal of 12-27-62 revision of "Reliability Program Provisions for Space Systems Contractors" dated Sept. 10, 1962 discussing differences in new draft]. (Copy of draft not included in 2-187)	"
188.	Letter from W. H. Pickering, JPL, to Homer E. Newell, NASA, June 27, 1963. [Evaluation of Ranger Project objectives and schedules, and request for a 6-month slip in Block IV schedule].	"
189.	Letter from Homer E. Newell, NASA to A. <del>H</del> . Hibbs, JPL, July 11, 1963. [Recommendation of Mr. Heacock of JPL as representative of JPL experimenters for Ranger Block III.].	"
190.	Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL, July 12, 1963. [Conclusions on project objectives for Ranger Blocks III and IV, and instructions on objectives for Blocks III, IV, and V].	"
191.	1(a). IOM from R. J. Parks to Senior Staff, Section Chiefs, August 9, 1963. [Separating Block III and Block V into two separate projects; appointment of Geoffrey Robillard as Project Manager for Block V]. (b) Letter from R. J. Parks to Oran W. Nicks, NASA, August 12, 1963. [Outlining above with IOM (a) enclosed].	"
192.	Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL, Sept. 18, 1963. [Approving JPL-recommended experiments and principal investigators for flight on Rangers 10 and 11, with Rangers 12 and 13 as backup].	"
	Teletype from Homer E. Newell, NASA to W. H. Pickering, JPL, Oct. 22, 1963, 8:18 am [Gold flaking problem, suspect diodes, and revised launch schedules].	"
194.	Letter from W. H. Pickering, JPL, to Homer E. Newell, NASA, Nov. 27, 1963. [Comments on interpretation of 20 Sept draft of the revised MI 37-1-1].	"

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B NO.

## TITLE

## LOCATION

195. Letter from W. H. Pickering, JPL, to Homer E. Newell, NASA, Dec. 6, 1963  
[invitation to appoint ~~to~~ a small review group composed of members of Kelley  
board to examine entire Ranger 6 system, -prior to launch]. FILES
196. Letter from Homer E. Newell, NASA, to W. H. Pickering, JPL, Dec. 13, 1963.  
[Cancellation of Block V. Request of explanation for need to increase JPL ceiling  
of 4000 in FY 1964]. "
197. Letter from Geoffrey Robillard, Ranger Block V Project Manager, JPL, to Dr. V. W.  
Howard, Northrop Space Laboratories, Sept. 17, 1963. [Confirming formation of  
Ranger Block V Mission Analysis Panel and participation of NSL personnel]. "
198. Office of Public Education and Information, Jet Propulsion Laboratory,  
Pasadena, California. "History of Rangers I-V, 3 pp. (Source Ref: JPL  
Technical Memorandum No. 33-1747, December, 1962). "
199. Space Programs Summary No. 37-17, Volume 1, for the period July 1, 1962 to  
September 1, 1962. Pasadena: Jet Propulsion Laboratory, Sept. 30, 1962 (CONF)  
"The Lunar Program". C.D.
200. Space Programs Summary No. 37-18, Volume 1, for the period Sept. 1, 1962 to  
November 1, 1962. Pasadena: Jet Propulsion Laboratory, Nov. 30, 1962 (CONF)  
"The Lunar Program". C.D.
2. Space Programs Summary No. 37-19, Volume 1, for the period Nov. 1, 1962 to  
December 31, 1962. Pasadena: Jet Propulsion Laboratory, Jan. 31, 1963 (CONF)  
"The Lunar Program". C.D.
202. Jet Propulsion Laboratory, W. L. Sjogren, D. W. Trask, C. J. Vegas, and W. R.  
Wollenhaupt, Physical Constants as Determined From Radio Tracking of the Ranger  
Lunar Probes, Technical Report No. 32-1057. Pasadena: December 30, 1966 FILES
203. Ranger VII Part I. Mission Description and Performance. Technical Report No.  
32-700. Jet Propulsion Laboratory, Pasadena, December 15, 1964. FILES
204. Ranger VII. Part II. Experimenters' Analyses and Interpretations, Jet Propulsion  
Laboratory, R. L. Heacock, G. P. Kuiper, E. M. Shoemaker, H. C. Urey, E. A. FILES  
Whitaker. Pasadena: February 10, 1965. Technical Report No. 32-700. *Shelf?*
205. Ranger VIII and IX. Part I. Mission Description and Performance. Technical Report  
No. 32-800. Jet Propulsion Laboratory, Pasadena: January 31, 1966 FILES  
*Shelf?*
206. Jet Propulsion Laboratory, Gerald M. Smith, Thomas Vrebalovich, and Donald E.  
Willingham, "Eyes on the Moon", Technical Report No. 32-937, April 15, 1966.  
Reprinted from Astronautics & Aeronautics, March 1966. FILES
207. Information Requested by NASA in Regard to Ranger Block III Missions in a letter  
from Cunningham (NASA) to H. M. Schurmeier (JPL), Nov. 1, 1967. FILES

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No.	Title	Location
208	J. L. E. Dreyer, <u>A History of Astronomy: from Thales to Kepler</u> Revised with a Foreword by W. H. Stahl, second edition, New York: Dover Publications, Inc., 1953	CIT Library
209	J. Tuzo Wilson, <u>IGY, The Year of the New Moons</u> (New York: Alfred A. Knopf, 1961.)	<sup>pf</sup> CIT Library
210	Fred Hoyle, <u>Astronomy</u> Garden City: New York: Doubleday & Company, Inc., 1962.	JPL Libra
211	<u>Space Programs Summary No. 37-23, Vol. VI</u> for the period <del>July</del> July 1, 1963 to September 30, 1963. "Space Exploration Programs and Space Sciences," Pasadena: Jet Propulsion Laboratory, Oct. 31, 1963.	JPL Libra
212	<u>Space Programs Summary No. <del>37-20</del> 37-20, Vol. III</u> for the period Jan. 1 1963 to February 28, 1963 "Deep Space Instrumentation Facility", Pasadena: Jet Propulsion Laboratory, March 31, 1963	JPL Librar
213	<u>Space Programs Summary No. <del>37-20</del> 37-20, Vol. VI</u> for the period Jan. 1 1963 to March 31, 1963, "Space Exploration Programs and Space Sciences," Pasadena: Jet Propulsion Laboratory, April 30, 1963.	JPL Librar
214	<u>Space Programs Summary No. 37-21, Vol. VI</u> for the period March 1, 1963 to <del>May</del> May 31, 1963. "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, <del>June</del> June 30, 1963.	JPL Librar
215	<u>Space Programs Summary No. 37-22, Vol. III</u> for the period <del>May</del> May 1, 1963 to June 30, 1963. "The Deep Space Instrumentation Facility", Pasadena: July 31, 1963.	JPL Libra
216	<u>Space Programs Summary No. 37-22, Vol. VI</u> for the period May 1, 1963 to July 31, 1963, "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, August 31, 1963.	JPL Libra
217	<u>Space Programs Summary No. 37-24, Vol. III</u> for the period Sept. 1, 1963 to <del>Oct</del> Oct. 31, 1963. <del>The</del> "The Deep Space Instrumentation Facility, " Pasadena: Jet Propulsion Laboratory, Nov. 30, 1963.	JPL Libra
218	<u>Space Programs Summary No. 37-24, Vol. VI</u> for the <del>period</del> period Sept. 1, 1963 to Nov. <del>30</del> 30, 1963. "Space Exploration Programs and Space Sciences," Pasadena: <del>Jet</del> Jet Propulsion Laboratory, Dec. 31, 1963.	JPL Libra
219	<u>Space Programs Summary <del>37-29</del> No. 37-29, Vol. VI</u> for the period July 1, 1964 to August 31, 1964. "Space Exploration Programs and Space Sciences", Pasadena: Jet Propulsion Laboratory, Sept. 30, 1964.	FILES
220	<u>An Evaluation of the Role of the Jet Propulsion Laboratory in Carrying Out Its Present Commitments to the National Aeronautics and Space Administration</u> F. E. Goddard, Jr., W. H. Bayley, D. K. Carlisle, J. R. Edberg, F. H. Felberg, A. R. Hibbs, B. P. Huber, R. Meghreblian, G. Neiswanger, J. Small, H. J. Stewart. Planning Report No. 35-5, Pasadena: Jet Propulsion Laboratory, December 15, 1961. (UNCLASSIFIED)	Library <del>or Files</del> JPL DISCREET

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<u>No.</u>	<u>Title</u>	<u>LOCATION</u>
221.	<u>Seminar Proceedings: Systems Engineering in Space Exploration</u> (Astronautics Information) May 1 - June 5, 1963. (Proceedings of a series of lectures given at Stanford University in the spring quarter of 1963 by personnel of the Systems Division of the Jet Propulsion Laboratory) Pasadena: Jet Propulsion Laboratory, June, 1965.	FILES
222.	<u>Space Programs Summary No. 37-25, Vol. VI</u> for the period Nov. 1, 1963 to December 31, 1963. "Space Exploration Programs and Space Sciences," Pasadena: Jet Propulsion Laboratory, Jan. 31, 1964.	JPL Lib
223.	<u>Space Programs Summary No. 37-26, Vol. VI</u> for the period Jan. 1, 1964 to Feb. 29, 1964. "Space Exploration Programs and Space Sciences". Pasadena: Jet Propulsion Laboratory, March 31, 1964.	"
224.	<u>Space Programs Summary No. 37-27, Vol. VI</u> for the period March 1, 1964 to April 30, 1964. "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, May 31, 1964.	"
225.	<u>Space Programs Summary No. 37-28, Vol. VI</u> for the period May 1, 1964 to June 30, 1964. "Space Exploration Programs and Space Sciences". Pasadena: Jet Propulsion Laboratory, July 31, 1964	"
226.	<u>Space Programs Summary No. 37-29, Vol. VI</u> for the period July 1, 1964 to August 31, 1964. "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, Sept. 30, 1964.	"
227.	<u>Space Programs Summary No. 37-31, Vol. VI</u> for the period No. 1, 1964 to December 31, 1964. "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, Jan. 31, 1965	"
228.	<u>Space Programs Summary No. 37-32, Vol. VI</u> for the period Jan. 1, 1965 to Feb. 28, 1965. "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, March 31, 1965.	"
229.	<u>Space Programs Summary No. 37-33, Vol. VI</u> for the period March 1, 1965 to April 30, 1965. "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, May 31, 1965.	"
230.	<u>Space Programs Summary No. 37-34, Vol. VI</u> for the period May 1, 1965 to June 30, 1965. "Space Exploration Programs and Space Sciences." Pasadena: Jet Propulsion Laboratory, July 31, 1965.	"
231.	<u>Van Dyke, Vernon, Pride and Power: The Rationale of the Space Program</u> Urbana, Illinois: University of Illinois Press, 1964.	JPL Lib 629.40973 V Copy 2

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NO.	TITLE	LOCATION
232.	JPL IOM No. 22, January 13, 1960. To: All Concerned. From: W. H. Pickering. Subject: Spacecraft S-1 Development. Directing that work on S-1 experiment using the Agena vehicle be given priority immediately behind the Sergeant program, proceed as expeditiously as possible to be ready on or before planned Vega date.	FILES
233.	JPL IOM No. 24A, January 26, 1960. To Senior Staff, Section Chiefs, Section Supervisors, Group Supervisors. From: W. H. Pickering. Subject: Program Director for Ranger. Program tentatively named RANGER, appointing C. I. Cummings as Program Director, and J. D. Burke continuing as his deputy.	"
234.	JPL Office of the Director Announcement No. 24, February 9, 1960. To: Senior Staff, Section Chiefs, Section Supervisors, Group Supervisors. From: W. H. Pickering. Subject: Organization and Responsibilities of the Division of the Space Sciences. Outlines functions of the Division, and section responsibilities.	"
235.	JPL IOM No. 30, February 10, 1960. To: Section Chiefs. From: W. H. Pickering. Subject: Role of the Section Chief. w/enclosure "Role of the Section Chief."	"
236.	JPL Announcement No. 26, February 12, 1960. To: All Personnel. From: W. H. Pickering. Subject: Appointment of Laboratory Deputy Director. Appointment of Brian O. Sparks effective Feb. 15, 1960	"
237.	JPL IOM No. 31, Feb. February 16, 1960. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Subject: RANGER Program Director's Office. Basic authority and responsibilities of Ranger Program Director and staff. <i>see 1022</i>	"
238.	JPL IOM No. 33, February 26, 1960. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Subject: Definition of Programs. Programs assigned to RANGER.	"
239.	JPL IOM, April 11, 1960. To: Senior Staff. From: Brian Sparks. Subject: NASA Proposed Statement on Role of the Jet Propulsion Laboratory. Enclosure: Proposed Role Statement dated April 4, 1960. Requests comments and suggested changes.	"
240.	JPL IOM No. 46, April 27, 1960. To: Distribution including Oran Nicks (q.v.). cc: Senior Staff. From: W. H. Pickering. Subject: Award of Lunar Capsule Contract. Award to Aeronutronics, instruction not to de-brief other contractors & their personnel particularly North American and Hughes, as it is against NASA policy.	"
241.	JPL Announcement No. 38, May 6, 1960. To: Senior Staff, Section Chiefs, Section Managers, Supervisors. From: W. H. Pickering (signed Brian Sparks). Subject: Appointment of Lunar Program Director. Appointment of J. D. Burke as Program Deputy Director of the Lunar Program.	"
242.	JPL Announcement No. 39, May 6, 1960. To: Senior Staff, Section Chiefs, Section Managers, Supervisors. From: W. H. Pickering (signed Brian Sparks). Subject: Appointment of Program Director and Program Deputy Director of the Deep Space Instrumentation Facility (DSIF). Effective May 9, 1960, Dr. E. Rechtin Program Director and Dr. N. A. Renzetti Deputy Program Director for Engineering and Operations on the DSIF.	"

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No.	TITLE	LOCATION
243.	JPL IOM No. 50, May 6, 1960. To: Senior Staff. From: W. H. Pickering Subject: Preparation of JPL Ten-Year Plan - 1961-1971 (1960 Edition). Planning guidelines; includes Attachment A: Outline of JPL Ten-Year Plan.	FILES
244.	JPL Announcement No. 43, May 13, 1960. To: Senior Staff, Section Chiefs, Section Managers, Supervisors. From: // W. H. Pickering. Subject: Appointment of Planetary Program Director. Effective May 16, 1960, R. J. Parks appointed Planetary Program Director and J. N. James appointed Program Deputy Director of the Planetary Program.	"
245.	JPL IOM No. 8, June 27, 1960. To: C. I. Cummings, J. D. McKenney, R. J. Parks, Technical Division Chiefs. From: Brian Sparks. Subject: Lunar and Planetary Program Names. cc: W. H. Pickering. Requests alternate suggestions to Attachment from E. M. Cortright, Assistant Director for Lunar and Planetary Programs, NASA; includes Pioneer, Ranger, Mariner, Surveyor, Voyager, and Prospector.	"
246.	JPL letter October 29, 1963 to Mr. Barton Kreuzer, RCA, Astro Electronics Division, Princeton, New Jersey, from R. J. Parks, JPL. In view of recent 2-month delay in schedule due to "diode problem," suggests possibility of other problems cropping up, possibly due to communications or responsiveness problems with the Field Service people. Suggests follow-on discussions concerning same.	"
247.	JPL IOM No. 45-64, August 12, 1964. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Subject: Critique of Ranger 7 Flight Operation. Requests comments on organization and implementation of the mission operations plan, including the release of information on-lab and to the public, in order to apply experience gained to future missions. Includes comments from B. T. Morris and E. Rehtin. (JPL DISCREET).	"
248.	TWX, Dec. 10, 1962 3:06 p.m. To: Office of the Associate Administrator, NASA Hq. From: JPL, W. H. Pickering. Brian Sparks, R. J. Parks, H. M. Schurmeier, and H. H. Haglund of JPL will attend Kelley Presentation on Dec. 12 at NASA Hq.	"
249.	TWX, Dec. 19, 1962, 11:19 a.m. To: Oran W. Nicks, NASA Hq. From: R. J. Parks, JPL. To advise we are taking the action necessary to remove all sterilization requirements from the Ranger and Surveyor Projects. States reasons. Concurrence requested.	"
250. Letter	July 20, 1961. To: Dr. Robert C. Seamans, NASA Hq. From: C. I. Cummings, JPL. Subject: Procedures for Decontamination of Ranger A3 Spacecraft.	"
251.	Letter Dec. 8, 1961. To: W. H. Pickering, JPL. From: H. E. Newell, NASA States scientific payloads planned for Ranger missions P-34, P-35, and P-36.	"
252.	Letter February 9, 1960. To: Dr. Abe Silverstein, NASA Hq. From: W. H. Pickering, JPL. Proposing that the overall lunar and interplanetary spacecraft program be entitled RANGER.	"
253.	Letter June 29, 1960. To: W. H. Pickering, JPL. From: Abe Silverstein, NASA Hq. Subject: [Inclusion of] Vela Hotel Experiments for Ranger 1 and 2 Spacecraft.	"



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NO.	TITLE	LOCATION
4.	Letter Sept. 16, 1960. To: E. M. Cortright, NASA Hq. From: C. I. Cummings, JPL. Thinks it inadvisable to put any additional scientific experiments on Rangers 3, 4, and 5 due to weight and power limitations. <i>same as 1424</i>	FILES
255.	Letter Oct. 14, 1960. To: W. H. Pickering, JPL. From: Abe Silverstein, NASA Hq. Will be at JPL on Oct. 27 with Cortright, Fleming, & Nicks of NASA Hq. Request detailed review of Ranger program emphasizing current and potential problem areas. Also wish to discuss other matters.	"
256a.	Letter Oct. 26, 1961. To: Clifford I. Cummings, JPL. From: Oran W. Nicks, NASA. Re Rangers 3 and subsequent, due to schedule slkps, engineering deficiencies, and cost overruns, following actions requested: Complete "Recovery Plan" for Aeronutronic capsule, strengthen JPL's technical direction of Aeronutronic & subcontractors, require that Aeronutronic strengthen its project structure, and initiate RCA efforts toward development of Ranger follow-on television capsule.	"
256b.	Letter Nov. 9, 1961. To: Oran W. Nicks, NASA. From: J. D. Burke, JPL. In partial reply to above (256a.) and letter Sept. 22, 1961 Nicks to Burke. Subject: Aeronutronic Lunar Capsule. Discusses status, Recovery Plan, Specific answers to Nicks' requests.	"
257a.	Letter Nov. 15, 1960. To: W. H. Pickering, JPL. From: Abe Silverstein, NASA. Requirements on data acquisition for the Ranger program using the 250 foot antenna at Jodrell Bank.	"
257b.	JPL IOM Nov. 22, 1960. To: W. H. Pickering. From: E. Rechtin. Suggests available NASA funds be spent at existing DSIF stations rather than at JODrell Bank, unless expenditure at Jodrell is a diplomatic or political necessity. Includes suggested reply to Silverstein from Pickering. (257c. below).	"
257c.	Letter Dec. 1, 1960. To: Abe Silverstein. From: W. H. Pickering, JPL. Explains E. Rechtin suggestion of Nov. 22, 1960 (257b. above).	"
258.	Letter Feb. 8, 1962. To: Oran W. Nicks, NASA. From: J. D. Burke, JPL. Subject: Ranger III Failure INvestigations. Lists faults and corrective measures JPL is taking.	"
259.	<del>Letter March 20, 1962. To: J. D. Burke, JPL. From: Oran Nicks, NASA. Proposals for bus experiments for Rangers PRA 6-9. Requests tentative integration inclusion of listed experiments, pending approval of steering committee.</del> <i>Changed - see 683</i>	"
260.	Letter May 4, 1962. To: W. H. Pickering, JPL. From: Homer E. Newell, NASA. Tentative approval of experiments reviewed by the Space Sciences Steering Committee proposed for Ranger Follow-on missions P-53 thru P-56.	"
261.	Letter May 8, 1962. To: W. H. Pickering, JPL. From: Oran W. Nicks, NASA. Requests detailed study of desirability of adding additional Ranger shots to currently approved series.	"
2.	Letter Aug. 14, 1962. To: Oran W. Nicks, NASA. From: Brian Sparks, JPL. Requests decision on recommendation concerning additional Ranger capsules, based on Sept. 1 scheduled date for authorization of contractors to initiate program.	"

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263.	Letter Nov. 5, 1962. To: Homer E. Newell, NASA. From: W. H. Pickering, JPL. Examining factors regarding Dr. Frank Press' recommendation that some of the subsequent Rangers be scheduled to carry landed capsule experiments.	"
264.	Letter Oct. 20, 1962. To: W. H. Pickering. From: Homer E. Newell, NASA. Establishment of review team for Ranger, in view of problems plaguing program, with members and chairman outside JPL. NASA will inform JPL immediately upon selection of constituents.	"
265.	Letter Nov. 15, 1962. To: M. W. Cunningham, Ranger Program Chief, NASA. From: J. D. Burke, JPL. Subject: Ranger Lunar Facsimile Capsule Project. Recapitulation including Background, Competitive approaches, Recommendations, Ground Rules, Description of three phases, Basic Philosophy and resultant JPL organization, Project Elements Emphasis, ADF organization, ADF Reporting Procedures, and Summation.	"
266.	Letter- JPL IOM Oct. 11, 1962. To: Senior Staff, Section Chiefs and Section Managers, Supervisors, Mariner R Division Representatives, and Ranger Division Representatives. From: Brian Sparks. Subject: Support for the RA 5 Mission. Establishes priority for RA-5.	"
267a.	JPL IOM Sept. 28, 1962. To: C. I. Cummings, R. V. Meghreblian, R. J. Parks. From: Brian Sparks. Subject: Agenda for Meeting of PSAC Panels. Proposed agenda for review and submission to Dr. N. E. Golovin of the President's Science Advisory Committee, for meeting Oct. 23 and 24, 1962.	"
267b.	PSAC MEMO for Franklyn W. Phillips, NASA. From: N. E. Golovin, PSAC. Subject: Proposed Joint Meeting at JPL of the PA PSAC Space Science and Space Vehicle Panels. Memo dated August 21, 1962.	"
268.	JPL Announcement No. 85, Dec. 18, 1962. To: All Personnel. From: W. H. Pickering. Subject: Establishment of Lunar and Planetary Projects Office.	"
269.	JPL Announcement No. 86, Dec. 18, 1962. To: All Personnel. From: W. H. Pickering. Effective immediately, appointing H. M. Schurmeier Ranger Project Manager, and J. D. Burke Special Assistant to the Ranger Project Manager.	"
270.	JPL IOM No. 114, June 5, 1963. To: Senior Staff, Section Chiefs, Section Managers, and Group Supervisors. From: Brian Sparks. Subject: NASA Resident Quality & Reliability Representative. Assignment has been filled since 2-4-63 by Mr. Clifford H. Rumin.	"
271.	JPL IOM No. 161, July 17, 1963. To: Senior Staff, Section Chiefs/Managers, Project Managers, and Administrative Assistants. From: V. C. Larsen, Jr., Office of Business Administration. Official word has been received from Dr. Homer Newell, NASA, directing the termination of all efforts toward the development of Ranger Block IV.	"
272.	JPL Announcement No. 101, August 9, 1963. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Geoffrey Robillard assigned as Project Manager for Ranger Block V, and Robert F. Rose promoted to Division Chief of the Propulsion Division, effective August 12.	"
273.	JPL IOM No. 200, October 2, 1963. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Subject: Role of the Assistant Laboratory Director for Tracking and Data Acquisition. (Role Statement enclosed.)	"

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BOOK NO.	TITLE	LOCATION
274.	JPL IOM No. 201, Oct. 9, 1963. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Subject: NASA Headquarters Reorganization. Quotes details from NASA release of Oct. 9, 1963, 10:00 A.M.	FILES
275.	JPL IOM No. 204, Oct. 30, 1963. To: All Personnel. From: W. H. Pickering. Subject: Ranger Block III Flights. Recommended postponement of next Ranger flight to the first quarter of next year.	"
276.	JPL IOM No. 207, Nov. 12, 1963. To: Senior Staff, Section Chiefs, and Section Managers. From: W. H. Pickering. Subject: Procurement Practices at the Laboratory. (Tech. personnel had assumed procurement duties.) Audit report extract attached.	"
277.	JPL IOM No. 218. Dec. 24, 1963. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Subject: - Establishment of the Deep Space Network. Interface with mission peculiar facilities and organizations to be determined.	"
278.	JPL IOM No. 8-64. Jan. 15, 1964. To: Senior Staff, Section Chiefs and Managers. From: W. H. Pickering. Priorities established for four Ranger and two Mariner C launches during 1965.	"
279a.	JPL IOM No. 14-64. Feb. 13, 1964. To: All Personnel. From: W. H. Pickering. Recent erroneous publicity concerning JPL; corrections. Attached TWX from Webb, NASA, and statement from Dr. DuBridge, Caltech.	"
279b.	TWX <del>2-13</del> Feb. 13, 1964. To: W. H. Pickering, JPL. From: James E. Webb, NASA. He & staff has complete confidence in the ultimate success of Ranger and other NASA projects assigned to JPL; can count on full support.	"
279c.	Statement from Dr. DuBridge (undated). No shakeup in JPL management will be made.	"
280.	JPL IOM No. 25-64. April 24, 1964. To: Senior Staff, Section Chiefs, Section Managers, Supervisors. From: W. H. Pickering. Dedication of SFOF, Central Engineering Bldg, Auditorium, and the Space Sciences Bldg, will be on May 14, 1964.	"
281.	JPL IOM No. 161, July 26, 1964. To: Division Chiefs and Division Managers. From: Brian Sparks. Ranger spacecraft launch, first space flight operation to be directed and controlled from the new SFOF, Bldg. 230, which was dedicated two months ago. Arrangements for visiting SFOF.	"
282.	JPL IOM No. 187, Dec. 23, 1964. To: Senior Staff, Section Chiefs/Managers. From: A. R. Luedecke. New position of Deputy Assistant Laboratory Director for Lunar and Planetary Projects created; Jack N. James appointed to position. Dan Schneiderman appointed Mariner C Project Manager.	"

## BOOK LIST #2

## RANGER

BOOK NO.	TITLE	LOCATION
200	JPL IOM No. 206, April 5, 1965. To: Senior Staff, Section Managers, Group Supervisors, Divisions 31 and 33. From: A. R. Luedecke. Appointment of Glenn E. Lairmore as Assistant Division Manager, Division 31, and SFOF Manager. Attachment: Role of SFOF Manager.	FILES
285.	JPL IOM No. 207, April 6, 1965. To: Senior Staff, Section Managers, Group Supervisors. From: A. R. Luedecke. Appointment of Donald E. Sowle as Assistant Laboratory Director for Financial Management and Procurement. Preliminary Charter is attached.	"
286.	Letter Nov. 20, 1963. To: Robert J. Parks, JPL. From: Oran W. Nicks, NASA Requirements to be placed on Project Managers.	"
287.	Letter Oct. 29, 1963. To: Dr. Homer E. Newell, NASA, From: W. H. Pickering, JPL. Diode contamination problem and the course of action to be followed for Ranger 6 and subsequent missions of Block III.	"
288.	Letter Sept. 18, 1963. To: W. H. Pickering. From: Homer E. Newell, NASA. Approval of recommendations for capsule experiments for Ranger 10-13.	"
289.	Letter August 8, 1963. To: G. M. Truszynski, NASA. From: E. Rechtin, JPL. Conversion of Ranger from L-band to S-band.	"
290.	JPL IOM No. 46, August 9, 1963. To: Senior Staff, Section Chiefs. From: R. J. Parks. Ranger Block III and Block V activities set up as two separate and distinct projects. Appointment of Geoffrey Robillard as Project Manager for Ranger Block V effective August 12, 1963.	"
291.	Letter June 13, 1963. To: W. H. Pickering, JPL. From: Homer E. Newell, NASA. Experiments proposed for Ranger Block IV by JPL personnel not approved.	"
292.	Letter June 27, 1963. To: Homer E. Newell, NASA. From: W. H. Pickering, JPL. Conclusions of evaluation of Ranger Project objectives and schedules. Recommends 6-month slip in the Block IV schedule, Re-examination of project beyond Block III (available in a week) after which he requests 6-month schedule slip for RA-10 and modifications of Ranger Project subsequent to RA-9 be firmed up A.S.A.P.	"
293.	Letter July 12, 1963. To: W. H. Pickering, JPL. From: Homer E. Newell, NASA. Implement following actions: Terminate impacting TV missions beyond Block III, Redirect Block IV efforts to CY 1965 hard-landing capsule missions, continue current Block V efforts but limit hardware commitments pending FY 1964 budget decisions.	"
294.	JPL IOM No. 95, May 2, 1961. To: Senior Staff. From: W. H. Pickering. Subject: Study on Accelerating the National Space Program. Study enclosed.	"
295.	JPL IOM No. 63, May 9, 1961. To: Senior Staff, Section Chiefs, Section Managers, Group Supervisors. From: Brian Sparks. Reassignment of responsibilities in Spacecraft sterilization activities.	"

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BOOK NO.	TITLE	LOCATION
29	JPL IOM No. 65. May 16, 1961. To: All Personnel. From: Brian Sparks Revision of Project Priorities.	FILES
297a.	JPL Announcement No. 64, July 7, 1961. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Effective June 26, 1961, appointment of Brooks T. Morris as Special Assistant for Reliability Assurance.	"
297b.	JPL IOM No. 107, July 7, 1961. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Role of Special Assistant for Reliability Assurance.	"
298.	JPL IOM No. 73, August 7, 1961. To: Senior Staff. From: Brian Sparks Subject: Data Operations and Control Facility (DOCF). Systems Division assigned responsibility and authority for overall design and system management of same.	"
299.	JPL IOM No. 114, October 5, 1961. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Establishment of Space Flight Operations Section. Charter enclosed.	"
300.	JPL IOM No. 16, July 21, 1960. To: Senior Staff. From: Brian Sparks. Preliminary design of spacecraft is the responsibility of the Systems Design Section of the Systems Division. John Small appointed to head preliminary design team for the 1962 Venus shot.	"
301.	JPL IOM No. 74, July 22, 1960. To: All Personnel. From: W. H. Pickering, and R. J. Parks. Transfer of Sergeant Program to Sperry, Utah on June 30, 1960.	"
302.	JPL IOM No. 22, August 18, 1960. To: Participants on Project ECHO. From: Brian Sparks. Quotes from Congratulatory Messages on Project Echo.	"
303a.	JPL Announcement No. 51. Oct. 14, 1960. To: Senior Staff, Section Chiefs, Section Managers, Supervisors. From: W. H. Pickering. Appointment of James D. Burke as the Ranger Project Manager of the Lunar Program.	"
303b.	JPL IOM No. 77, Oct. 13, 1960. To: Senior Staff, Technical Section Chiefs, From: W. H. Pickering. Lunar Program Organization and Operation beyond Ranger..	"
303c.	Attachments to (303b above). 10-13-60 "Operational Policy - Lunar Program" 10-13-60 "Role of Lunar Project Manager".	"
304.	JPL IOM No. 79, October 26, 1960. To: Senior Staff, Section Chiefs, Section Managers, Supervisors. From: W. H. Pickering. Laboratory office at NASA Hq. terminated immediately. Dr. Goddard arriving at JPL in November and will assume position of Special Assistant to the Director.	"
305.	JPL IOM No. 81, November 9, 1960. To: Senior Staff, Section Chiefs, Section Managers. From: W. H. Pickering. Subject: Laboratory Policy and Procedure for Space Flight Operations for Lunar and Planetary Programs.	"
306.	Letter April 26, 1963. To: W. H. Pickering, JPL. From: Homer E. Newell, NASA. Tentative approval for non-visual experiments for Ranger Block IV Missions.	"

(continued)

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## RANGER

BOOK NO.	TITLE	LOCATION
	<del>Gamma-Ray Spectrometer: Dr. James Arnold, Univ. of Calif., San Diego</del> <del>Radar: Mr. Walter E. Brown, Jr., JPL.</del>	2-180
307.	Letter April 24, 1963. To: Oran W. Nicks, NASA. From: R. J. Parks, JPL Reference: TWX from Oran Nicks to R. J. Parks dated April 2, 1963. Have carried out studies to investigate the problems in re-instituting terminal sterilization on the Ranger Project. Recommendation against same.	"
308a.	Letter NOT SENT March 7, 1963. To: Dr. Robert C. Seamans, nasa From: W. H. Pickering. Cannot justify initiation of "sole source" procurement action. Requests approval of procurement plan submitted by JPL.	"
308b.	JPL Procurement Plan, Feb. 20, 1963. To have been enclosed with above (308a.)	"
308c.	Letter March 8, 1963. To: W. H. Pickering, JPL. From: Homer E. Newell, NASA JPL is directed to issue to Northrop Corporation a Letter Contract establishing Northrop as Ranger spacecraft system contractor.	
309.	<del>Letter March 17, 1963. To: Harris M. Schurmeier, JPL. From: Newton W.</del> <del>Cunningham, NASA. Ranger mission objectives for Block III and Block IV</del> <del>reviewed and approved.</del>	"
310.	Letter January 21, 1963. To: W. H. Pickering. From: Homer E. Newell, NASA Requesting assignment of resident NASA personnel specializing in the Relia- bility and Quality Assurance field to JPL.	see 188
311.	<del>(Statement). "Ranger D Target Selection" [RA-9] March 8, 1965.</del>	see 2-856
312.	(Statement). "Hilburn Board Recommendations and Resultant Actions." No date	"
313.	Letter March 22, 1962. To: James E. Webb, NASA. From: W. H. Pickering, JPL Re recent exchange of correspondence between Pres. Kennedy and Premier Krushchev on cooperative space ventures, recommends that we propose Surveyor series be committed to fly on Soviet launch vehicles. Soviets have already demonstrated capability of handling a 2500-pound Surveyor. Enclosed statement "Items to Consider in Flying Surveyor on Soviet Vehicles."	"
314.	JPL IOM August 11, 1961. To: All Concerned. From: J. D. Burke. Notice of authorization by NASA to place Letter Contract to RCA Astro-Electronics Division for the high-resolution TV package.	"
315.	JPL IOM January 4, 1962. To: W. H. Pickering. From: J. D. Burke. Subject: Recommendation to launch Ranger RA-3.	"
316.	Letter December 31, 1962. To: W. H. Pickering, JPL. From: Homer E. Newell, NASA. Summary of results and outline of requirements. Background for this letter came from meetings with JPL staff at NASA Hq. on Nov. 27, Dec. 8, Dec. 12, Dec. 17 and from Hq. subsequent discussions.	"

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BOOK NO.	TITLE	LOCATION
	Letter Oct. 26, 1962. To: W. H. Pickering, JPL. From: Homer E. Newell NASA. Modifications to Hugh Dryden dated-D- memo dated Dec. 23, 1960 for Sterilization Requirements for Lunar and Planetary Spacecraft. New guidelines.	FILES
318.	Letter Jan. 26, 1960. To: W. H. Pickering, JPL. From: Abe Silverstein, NASA. "NASA Steering Group on Lunar, Planetary, and Interplanetary Exploration" will be formally constituted, as requested in JPL letter of Dec. 17, 1959.	"
319.	Letter Jan. 25, 1960. To: W. H. Pickering, JPL. From: Abe Silverstein, NASA. According to request of JPL letter Dec. 14, 1959, statement of policy for dealing with outside organizations in the development of scientific experiments to be carried on missions for which JPL is assigned overall responsibility.	"
320.	(Statement). April 27, 1960. From: T. Keith Glennan, NASA. "Decision to Negotiate on the Lunar Capsule." Selection of Aeronutronics as contractor for development, design and production of capsules.	"
321.	Letter Feb. 22, 1960. To: NASA, Santa Monica, Calif. Att: Earl J. Sample. From: R. A. Lawson, JPL. Advance Notification of Intent to Procure four Lunar Capsule Study Programs.	
322.	JPL IOM April 15, 1960. To: C. I. Cummings. From: f Brian Sparks. Notice that Dr. Glennan has decided NASA will make source selection decision on contracts over one million dollars beginning immediately with the moon capsules proposals now awaiting evaluation.	"
323.	Letter March 10, 1960. Memo to: Operating Heads of Headquarters Offices and Directors, NASA Centers. From: T. Keith Glennan, NASA. Comments on Monterey Conference. Request for maintenance of realistic schedules.	"
324.	Letter Oct. 14, 1960. To: Robert C. Seamans, Jr., NASA. From: W. H. Pickering. Ref: Memo dated Feb. 19, 1960. Request that James D. Burke be officially approved as the replacement for Mr. Cummings on the Agena-B Coordination Board and as Chairman of the Lunar Committee.	"
325.	Letter July 11, 1960. To: W. H. Pickering, JPL. From: Abe Silverstein, NASA. Implementation of known and effective decontamination and sterilization procedures and development of new ones. Further steps discussed at meeting at NASA Hq. on June 29, 1960.	"
326.	<del>Letter October 26, 1961. To: Clifford I. Cummings/ From: Oran Nicks, NASA. Steps to take to complete the "Recovery Plan" from Aeronutronic and initiate RCA efforts toward the development of Ranger follow-on television capsule.</del>	<del>"</del> See 256a
327.	Letter June 2, 1960. To: Commanding General, U.S. Army Ordnance Missile Command, Att: Dr. Ernst Stuhlinger, Development Operations Division, Army Ballistic Missile Agency, Redstone, Alabama. From: Abe Silverstein, NASA. NASA Order HS-219 with ABMA for lunar studies (technical monitoring of) has been transferred to JPL.	"
328.	Letter July 5, 1960. To:	

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BOOK NO.	TITLE	LOCATION
328.	Letter July 5, 1960. To: W. H. Pickering, JPL. From: Abe Silverstein, NASA. Office of Lunar and Planetary Programs will serve as the principal coordinating group between JPL and NASA Hq. Information copies of all future correspondence from JPL to NASA to be sent to Edgar M. Cortright, Assistant Director of that office.	FILES
329.	Page One of letter, December 28, 1962. To: Edgar M. Cortright, NASA. From: W. H. Pickering, JPL. Re: Evaluations and Recommendations discussed at Hq. meeting 17th of December. If all sterilized equipment must be eliminated from Ranger flight hardware, <del>schedule</del> we recommend <del>schedule</del> be slipped to as early as possible in 1964 - which will conflict with Mariner R 1964 flight. Conflict is so serious that Ranger objectives cannot be met-unless the Mariner R Project is cancelled.	"
330.	TWX February 5, 1962. To: W. H. Pickering, JPL. From: Robert C. Seamans, Jr. NASA. "Effective February 1, I have delegated responsibility for approval of payload decontamination procedures employed in the NASA lunar and planetary program to Dr. Homer Newell. All future communications on this subject should be sent to the Office of Space Sciences."	"
331.	Letter February 16, 1962. To: W. H. Pickering, JPL. From: Oran W. Nicks, NASA. Effective Feb. 7, 1962, NASA Personnel assigned as Program Chiefs and Program Engineers for Ranger, Surveyor and Mariner Programs.	"



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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
332a <del>332b</del>	Memorandum from Nicks to Newell, Cortright and Clark, 23 November 1962, regarding <del>letter</del> <sup>Memo</sup> of Oct. 6, 1961.	
332b	<del>Letter from</del> Memo Nicks to Silverstein, "Analysis of JPL-Headquarters Relationships and Recommendations for Improvements," October 6, 1961.	Files
333	Memo, Pres. Kennedy to V.P. Johnson, requesting information from the Nat. Space Council on the benefits of, and future course for, the U.S. space program, April 9, 1963.	Files
334	Letter, Newell to Pickering Funding for FY 1962, including allotment for the Aeronutronic overrun, Dec. 21, 1961.	Files
335	Memo for files, Oran Nicks, "Trip to JPL April 24-26" dated May 2, 1962. (Ranger problems included )	Files
336	Memo for Dep. Dir., OSS, from O. W. Nicka, Jan. 15, 1962, Sub: "Review of JPL-RCA Management of Ranger Camera Capsule"	Files
337	Memo for Lunar and Planetary Personnel from Oran Nicks, Dated Feb. 7, 1962, Sub: "Redefined Assignments" (What people are now in charge of what.)	Files
338	<del>Memo from Seamans to Silverstein, Dtd. August 11, 1961; Sub: "Approval of Preliminary Project Development Plan for Ranger Follow-on Flights"</del>	See 2-1139 Files
339	<del>Letter, Burke to Nicks, Dtd. Nov. 9, 1961, Sub: Aeronutronic Lunar Capsule" (including problems, goals, and attachments).</del>	Files
340	<del>Letter, Nicks to Cummings, Dtd October 26, 1961, regarding Ranger situation and request for recovery plan (see 339)</del>	See Files 256a
341	Letter, Nicks to Burke, Dtd September 22, 1961, regarding review of Lunar capsule situation, request for more info.	Files
342	<del>Letter, Nicks to Cummings, September 27, 1961, request for information regarding improved payload cap. on Agena</del>	Files See 1147
343	<del>Letter, Nicks to Cummings, October 26, 1961, regarding Aeronutronics Lunar Capsule situation</del>	Files
344	Letter, Silverstein to Pickering, Feb. 16, 1961, status of NMI 4-1-1.	Files
343a	Letter of intent of NASA to enter into a contract with the Institute, dated 12/18/58. Also TMI dated Nov. 18, 1958	Files
343b	Basic contract NASw-6 between NASA and the Institute dated May 1, 1958 thru Dec. 31, 1961 (17 amendments)	Files

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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
345	Memo to staff from Silverstein, Mar. 29, 1961, sub: Assignment of Surveyor Project Manager at JPL	Files
346	Memo for Director of Launch Vehicle Programs from Silverstein, March 29, 1961, Sub: Implementation of Nasa Management Instruction 4-1-1.	Files
347	Memo for staff, from Silverstein, March 29, 1961, Sub: "Assignment of Ranger Project Manager" at JPL including new role for Agena Coord. Board	Files
348	Letter from Cortright to Col. Martin, USAF, March 27, 1961, decision to request AF payload for Orbiter project	Files
349	Memo to F. S. Marriott from O. W. Nicks, May 24, 1961, Sub: Info on the Lunar Drill System (Surveyor)	Files
350	<del>Letter to Pickering from Silverstein, June 9, 1961, concerning decision for payloads for follow-on Rangers.</del> <i>same as 2-1129</i>	Files
351	Memo for the Associate Admn. from Newell and Holmes, Oct. 22, 1962, Sub: Establishment of a Joint OSS/OMSF Working Group (for Lunar exploration)	Files
352	Letter, Sparks to Newell, September 21, 1962, recommendation to replace the Atlas/Centaur with Saturn C-1/Agena D.	Files
353	Newell to Sparks, October 23, 1962, rejection of idea proposed by Sparks in 352 above.	Files
354	<del>Letter, Sparks to Newell,</del> Letter, Newell to Pickering, January 8, 1964, Review of JPL comment on NMI 37-1-1	Files
355	Letter, G.J.F. MacDonald to Oran Nicks, expression of concern over JPL decisions on RCA TV payload. Oct. 24, 1962	Files
356	Letter, Nicks to MacDonald, November 7, 1962, explanation of plans concerning RCA TV payload noted in 355.	Files
357	Letter, Nicks to Pickering, November 7, 1962, same subject as 355 and 356.	Files
358	Memo, Nicks to Newell, Nov. 9, 1962, Sub: Statement of NASA Sterilization Policy + enclosure of policy.	Files
359	Letter, Sutton to Newell, request for more seismic capsule Rangers after RA-5. October 23, 1962.	Files

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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
360	Letter, Nicks to Pickering, Nov. 14, 1962, Understanding of status of the Remaining Ranger program.	Files
361	Memo for the Record, O. Nicks, Subject: Ranger Project Activities Discussion on 11 October 1962.	Files
362	Letter, Urey to Newell, October 24, 1962, comment on relatively poor science value of TV payloads for Ranger	Files
363	Letter, Newell to Urey, November 15, 1962, same subject as 362.	Files
364	Memo, Nicks to Newell, November 16, 1962, Sub: Mr. Webbs Memo with respect to the comments by Hollis Hedberg (what kind of Lunar program is desirable)	Files
365	Letter, Urey to Newell, November 21, 1962, same subject as 362	Files
366	<del>Letter, Newell to Pickering, December 31, 1962, request for info on Ranger and lunar program in general.</del>	<del>Files</del> 2-316
367	Letter, <del>Mr</del> Seamans to Pickering, September 24, 1962, response to previous letter, suggests immediate meeting.	Files
368	Letter, Pickering to Seamans, August 15, 1962, Sub: Ranger Project Activities in support of manned lunar flight program. See 367 above.	Files
369	<del>Letter from Sparks to Nicks, August 14, 1962, recommendation to retain aeronautics team in business.</del>	<del>Files</del> same as 362
370	Letter Interoffice memo, Pickering to all Personnel, Sub: Recent Publicity Regarding the Laboratory, Dec. 28, 1962.	Files
371	<del>Letter, Parks to Nicks, April 24, 1963, Sub: Terminal Sterilization of Ranger Spacecraft.</del>	<del>Files</del> See 307
372	Letter, Nicks to Parks, May 17, 1963, Sub., terminal sterilization of Ranger Spacecraft.	Files
373a	Letter, <del>Urey to Newell</del> Nicks to Hobby, Feb. 7, 1962, Sub: sterilization program. enclosure of Review of Sterilization Program dated July 26, 1962.	Files
373b	G. Hobby Overview of Sterilization Program 26 July 1962	

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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
374	Memo, Milwitzky to Nicks, January 8, 1963, Sub: Surveyor Program Discussions, December 17, 1962. (Includes note of JPL request that Orbiter is too big a load for the Lab.)	Files
375	Memo for the Files, <del>0//Nicks</del> <del>Wm./0p</del> Newton Cunningham, Sub: Ranger Program Objectives, December 21, 1962.	Files
376	Memo, Newell to Webb, March 26, 1963, Sub: OSS-OMSF relationship.	Files
377	Memo, Nicks to Chairman of Planetology Subcomitt., Sub: Ranger Block V experiments, August 22, 1963.	Files
378	Memo for the Record, OR Nicks, October 22, 1963, telecon with General Estes, USAF, of Oct. 18. contaminated diodes.	Files
379	Memo for Records October 28, 1963, O.R. Nicks, Sub: Visit to Continental Device Corporation. (Diodes)	Files
380	Interoffice Memo No. 13-64, Feb. 5, 1964, Pickering to all personnel, Sub: Ranger 6 Failure.	Files

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NO.	TITLE	LOCATION
381.	Sedov, L. I. "Ten Years of Space Exploration in the Soviet Union" Presented at the XVIII International Astronautical Congress, Belgrade, Yugoslavia, September 25, 1967. [Soviet firsts]	FILES
382.	<u>Space Programs Summary No. 37-27, Volume I</u> , for the period March 1, 1964 to April 30, 1964. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, May 31, 1964. CONFIDENTIAL	JPL LIB SPS 37-27, Vol. 1 CY 573
383.	<u>Space Programs Summary No. 37-26, Volume I</u> , for the period January 1, 1964 to February 29, 1964. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, March 31, 1964. CONFIDENTIAL	SPS 37-26, Vol. 1 CY 632
384.	<u>Space Programs Summary No. 37-25, Volume I</u> , for the period November 1, 1963 to December 31, 1963. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, January 31, 1964. CONFIDENTIAL	SPS 37-25, Vol. 1 CY 763
385.	Interview with Homer E. Newell, by R. Cargill Hall, JPL, and Dr. E. M. Emme, NASA at Washington, D. C. "History of Ranger". March 5, 1968.	FILES
386.	<u>Space Programs Summary No. 37-30, Volume I</u> , for the period Sept. 1, 1964 to Oct. 31, 1964. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, November 30, 1964. CONFIDENTIAL	JPL LIB 67
387.	<u>Space Programs Summary No. 37-29, Volume I</u> , for the period July 1, 1964 to August 31, 1964. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, Sept. 30, 1964. CONFIDENTIAL	"
388.	<u>Space Programs Summary No. 37-28, Volume I</u> , for the period May 1, 1964 to June 30, 1964. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, July 31, 1964. CONFIDENTIAL	"
389.	<u>Space Programs Summary No. 37-31, Volume I</u> , for the period Nov. 1, 1964 to December 31, 1964. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, January 31, 1965. CONFIDENTIAL	"
390.	<u>Space Programs Summary No. 37-34, Volume I</u> , for the period May 1, 1965 to June 30, 1965. "The Lunar Program." Pasadena: Jet Propulsion Laboratory, July 31, 1965. CONFIDENTIAL	"

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- 3-91 Memo, Crocker to Newell/Cortright, ~~54~~ January 23, 1964, regarding senate space committee mood re: Ranger and the Lunar program. Files
- 392 Memo, Nicks to Cunningham, March 19, 1964, Sub: Test and Operations Program for Ranger Spacecraft. Files
- 393 Letter, Faget (MSFC) to Foster (OSS), March 13, 1964, Sub: Estimated size of Ranger 6 impact crater and recommendations for subsequent Ranger flight missions. Files
- 394 Memo, Nicks to Cortright (I think), May 1, 1964, Sub: Ranger 7 impact point, concerns 393 above. Files
- 395 Memo, Nicks to Cortright/Newell, April 9, 1964, attacks Ranger 6 review board methods. Files
- 396 Memo, Cunningham to Nicks and Cortright, May 6, 1964, Summary of Ranger 7 TV subsystem redesign, rework, and test at RCA. Files

See 2-1856

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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
397	Letter, Newell to Pickering, August 7, 1964, Sub: JPL work in-house and contracted out for the various flight projects, esp. Mariner.	Files
398	TWX, Nicks to Schurmeier, Sept. 4, 1964, OK delay of launch of Ranger 8 for one month (Ranger C)	Files
399	Nemo, Nicks to Newell, Sept. 8, 1964, Sub: Report on Ranger 7 Presentation to IAU.	Files
400	Memo, Newell to Webb, Sept. 18, 1964, Sub: Naming Lunar Landing sites.	Files
401	Memo, Cunningham to Newell, Nov. 9, 1964, Sub: Dissemination of Ranger 7 Photos by Private Firms.	Files
402	Nicks to Newell, Memo, Nov. 17, 1964, Sub: Ranger Scientific mission (flight to backside of moon)	Files
403	Memo, Rechtin to Executive Council, August 3, 1964, "Suggested Changes Due to Ranger 7 Success" (includes lessons learned and suggested mission changes.)	Files
404a	OSSA/Senior Council Meeting notes, 1964	
404b	OSSA/Senior Council Meeting notes, 1963	
404c	OSSA/Senior Council Meeting notes, 1962	Files
405	Memo, Piasecki to W.H. Pickering, August 20, 1962, concerning Vega decision and Centaur problems.	Files
406	Memo, K. C. Coon to L. S. Frankenstein, August 6, 1963, "Ranger Block V Status Information for Center Directors Quarterly Meeting"	Files
407a	Letter, Glennan from Pickering, November 20, <del>1958</del> 1958, JPL-ABMA relationship.	Files
407b	H. Dryden to DuBridge, February 17, 1961, NASA-JPL "Agreement."	Files
<del>407d</del>	DuBridge to Dryden, Feb. 22, 61 - confirming above Agreement	"
407c	TWXs between JPL and NASA, Nov & December 1958, concerning the basic contract.	Files

## BOOK LIST NO. 2

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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
408	LA Times, Feb. 4, 1964, "Board will Study Failure of Ranger 6, Series' Six Flop May Hurt Plan for Manned Landing."	Files
409	Memo, Heacock to Schurmeier, March 25, 1964, "Special Ranger Design Study Committee Report" (investigation and recommendation of changes to RCA/JPL systems to improve reliability.)	Files
410a	Demo to Distribution from J. D. Burke, April 30, 1962, "Study by Dr. G. P. Kuiper of the design effectiveness of the Ranger TV equipment."	
410b	Letter, Kuiper to Cunningham, April 27, 1962, same subject as 410a.	Files
411	Memo, B. T. Morris to W. H. Pickering, February 26, 1962, "Ranger RA-3 Failure Investigation and Analysis Summary."	Files
412	Technical Bulletin No. 4, Ranger III (flight), Feb. 9, 1962	Files
413	Ranger Technical Bulletin No. 6 (RA-1 flight), September 28, 1961.	Files
414	Trip Report, J. D. Burke, Dec. 7, 1961, "Ranger II Failure Review (12-4) and Agena Management Meeting (12-5) Washington, D. C."	Files
415	Memo, Rechtin to Sparks, February 20, 1963, "Discussion of Rebuttal to Kelley Report" <del>Files</del>	Files
416	Memo, Cummings to Sparks, June 28, 1963, "Task Assignment on Data Handling." Data processing and creation of the DSN.	Files
417	<del>Memo, Cummings to Burke, July 5, 1961, "Ranger Follow-On" (BRk III)</del> 2-1157	Files
418a	Memo, Schurmeier to Pickering, July 11, 1963, "TV Experimenter Situation for Ranger" See 418b.	Files
418b	Letter, Kuiper to Cunningham, June 18, 1963, proposal to monitor RCA TV program.	Files
419	Org. Chart for NASA Office of Lunar and Planetary Programs, Nov. 21, 1960.	Files



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420	Designations For Missions and Payloads in the Satellite Lunar, and Planetary Programs, April 28, 1960 <i>See 1405a (for letter)</i>	Files
421	Memo, to M. Eimer from Heacock, Sloan, and Neugebauer, January 13, 1960, "Scientific Experiments for the Lunar Impact Bus"	Files
422	Enme interview with H. J. Stewart, July 30, 1965, early history of NASA planning, Ranger origins,	Files
423	Letter, "obillard to Cunningham, September 26, 1963, "Block V Status Report"	Files
424	Memo No. 239, Luedecke to Dist., July 28, 1965, "Operating Plan for Support fo Flight Projects by Tech. Divisions"	Files
425	Memo, <sup>38-64</sup> Pickering to Senior Staff, July 21, 1964, "Project Assignment"	Files
426	Memo No. 134, Sparks to Dist., March 13, 1964, "JPL Lunar and Planetary Launch Schedule"	Files
427	<del>Memo No. 128, Sparks to Dist. Jan. 23, 1964, Deep Space Network Appointments. (creation of DSN)</del>	<del>Files</del> <i>trans to 7-22</i>
428	<del>Memo No. 186, Pickering to Dist.,</del> Speech, Albert R. Hibbs, Jan. 31, 1968, <u>"The Tortuous Path to the Planets"</u>	Files
429	FY 1964 Project Guidelines, RJ Parks, April 1, 1963	Files
430	Memo No. 170, Pickering to Dist., March 1, 1963, "JPL Lunar and Planetary Launch Schedule"	Files
431	Memo, J. F. Shea to Oran Nicks, October 23, 1962, "Plans for Unmanned Lunar Orbiter Development"	Files
432	<del>Letter, Newell to Pickering, December 31, 1962, outlines requirements for action/ on Ranger Program</del> <i>316</i>	Files
433	Memo, Nicks to Cortright?, December 6, 1961, "Lunar Program Support to Manned Lunar Landing."	Files
434	Gen. Mngt Instruction 2-2-11, August 2, 1960, "NASA-JPL Relationships"	Files
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437	Memo No. 108, Sparks to Senior Staff, February 5, 1963, Staff Assignments for C. I. Cummings	Files
438	Memo No. 173, Pickering to All Personnel, March 12, 1963, Selection of Northrop as Ranger Subcontractor.	Files
439	Memo No. 1-64, Pickering to Senior Staff, January 2, 1964, Assistant Laboratory Director for Technical Divisions No. 91	Files
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441	Memo No. 177, Pickering to Dist., April 9, 1963, Charter for Quality Assurance and Reliability Office.	Files
442	Memo No. 175, Luedecke to Dist., October 1, 1964, <del>1776</del> Formation of Project Engineering Division	Files
443	"Summary of NASA Efforts Concerning the Decontamination and Sterilization of Lunar and Planetary Spacecraft"	Files
444	"A Statement by the President and Introduction to Outer Space," Prepared by the President's Science Advisory Committee, March 26, 1958.	Files
445	<u>NASA*JPL RELATIONSHIPS and Role of the Western Coordination Office, National Aeronautics and Space Administration, Washington, D. C.: McKinsey &amp; Company, Inc., March, 1959.</u>	Files
446	General Management Instruction No. 4-2-2, October 13, 1961, "Quality Assurance Policy as Applied to NASA Programs"	Files
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450	<del>Letter</del> <sup>Memo</sup> , Seamans to Associate Adm. for Space Science and Applications, Oct. 30, 1964, "Lunar and Planetary Spacecraft Sterilization Requirements"	Files
451	Tech. Report No. 32-241, <u>The Ranger Project: Annual Report for 1961</u> . JPL, June 15, 1962. Conf;	JPL Lib. <i>Shelf</i>
452	Thomas, Shirley, <u>Satellite Tracking Facilities, Their History and Operation</u> , Holt, Rinehart and Winston, Inc., New York, 1963.	JPL Lib. 629.437 <i>shelf</i>
453	<del>Let</del> Memo, Newell to Seamans, November 27, 1964, "Lunar and Planetary Spacecraft Sterilization Requirements" in response to 2-450 above.	Files
454a	Memo, Seamans to Newell, January 15, 1962, procedure for decontamination of Ranger lunar impactter.	Files
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455	Memo, Dryden for Glennan, to Program Directors, NASA Headquarters Directors, Field Centers, December 23, 1960, "Decontamination and Sterilization Procedures for Lunar and Planetary Space Vehicles"	Files
456	Memo, Cortright to Dr. Randt, December 1, 1960, Decontamination and Sterilization of Spacecraft.	Files
457	Memo for the Record, <sup>9</sup> Leonard I. Jacobs, Facilities Coord., NASA, August 16, 1960, "Air Force-NASA Agreement for Atlantic Missile Range"	Files
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460a	JPL Comments on RA-5 <sup>Kelly</sup> <del>Hillburn</del> Investigation, Feb. 7, 19643.	Files
460b	JPL interviews, RA-5 Investigation, <del>n.d.</del> 11-2-62	Files
461	IOM, W. K. Victor to RA-5 Failure Investigating Board, November 13, 1962, "Submission for Board Review"	Files
462	Speech by James E. Webb at the National Conf. of the Amer. Society for Public Admn., Detroit, Michigan, April 13, 1962, "Administration and the Conquest of Space" NASA News Release	Files
463	Ranger Blk III special Study, Dec. 4, 1962, John Small ed., Reviews ways to assure success for Blk III)	Files
464 a, b, c	Ranger Blk II Flight Performance Results, various reports, February 1963.	Files
465 a, b, c	Ranger Blk I Flight Performance Results, various Reports, February 1962.	Files
466	Letter from Dr. Pickering to E.C. Buckley, Office of Tracking and Data Acquisition, NASA, dated July 8, 1963.	Files
467	Letter from R.C. Seamans, Jr. of NASA to Dr. Pickering dated June 14, 1963. (manpower ceiling)	Files
468	IOM No. 40 dated March 31, 1960, All Personnel from W.H. Pickering, Subject: Lab Manpower Situation.	Files
469	Letter from Dr. Pickering to Dr. A. Silverstein, NASA dated Dec. 29, 1959	Files
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471	Letter from Richard E. Horner to Dr. Pickering, dated December 16, <del>1959</del> 1959	Files
472	Pamphlet, <del>Fig</del> Third Semi-Annual NASA Staff Conference Program Formulation and Status of Activities, Monterey, California, 3- 5 March 1960	Central Files
473	<del>Rough Draft of Ranger Final Report 4-25-67</del> See 2-122	Files
474	Cunningham Interview on Project Ranger, 3-6-68	Files

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476	IOM from C.R. Gates, to Distribution, Minutes of AGENA Study Committee Meeting Held This Date. Jan. 7, 1960	"
477	IOM from R.V. Morris/J.W. Stearns dated 1/13/60, to C.R. Gates Subject: Integration of S/C and Injection Vehicle for Agena Lunar Program.	"
478	Conference Report from J.D. Burke, dated 4/14/60, Visit by Los Alamos and Sandia People	"
479	<del>Conference Report by J.D. Burke, dated</del> A LASL-Sandia Proposed Vela Hotel Experiment for the Ranger A-1 and A-2 Probes, May 3, 1960.	<i>file</i>
480	Letter from Abe Silverstein dated June 29, 1960 to Dr. Pickering Subject: Vela Hotel Experiments for Ranger 1 and 2 Spacecraft.	<i>Library</i>
481a	Letter from A.W. Betts [Brig. Gen., <del>is</del> Director of ARPA] dated April 15, 1960 as enclosure to above, to Dr. Clark of NASA	"
482	Minutes of Fourth Meeting Agena-B Coord. Board, July 6,7, 1960, Ben Milwitzky, Secretary	"
483	NASA Agena B Program, dated 12 Aug. 1960, B.A. Schreiber, Lt. Gen. Commander USAF, Headquarters Air Research & Development Command Title of Document is "Space System Development Plan."	"
484	Minutes of Fifth Meeting Agena-B Coord. Board, Sept. 7, 1960, Ben Milwitzky	"
485	Memo to File from J.L. Norton of STL, dated Oct. 12, 1960, Subject: Minutes of Agena-B Meeting at STL 7 Oct* 1960.	"
486	Minutes of Sixth Meeting Agena-B Coord. Board, Oct. 13, 1960, Ben Milwitzky	"
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488	Memo for the Record from J.L. Stamy, et al dated 11 Feb. 1960, subject: Trip to Lockheed and BMD on Agena Funding	"
489	Minutes of Eighth Meeting Agena-B Coordination Board, Jan. 18, 1961 zsz Albert J. Kelley, Deputy Chairman	"
490	Institute for Defense Analyses, Jason Division, "Vela Hotel: Comments on Simplified X Ray Detectors for Interim Use," by V.L. Fitch and L.M. Lederman, Jan. 24, 1961	"
491	Minutes of Ninth Meeting Agena-B Coord. Board, Mar. 1, 1961 Ben Milwitzky, Sec'y	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
492	Trip Report dated Mar. 3, 1961 to Agena B Coordination Board Meeting and Visit to Bell Aerodynamics Corp, Niagara Falls, N.Y., by J.D. Burke	Burke File Library
493	Trip Report dated 5-12-61 to NASA Agena-B Management Meeting held at Marshall Space Flight Center, by G.P. Kautz	"
494	Letter to Robert C. Seamans Jr. from Harold Brown, Director of Defense Research and Engineering dated July 10, 1961, advising that a DOD radar instrumented ship will be provided to support Project Ranger.	"
495	Minutes of the Agena-B Coord. Board, dated Oct. 10, 1961, Max J. Cumberland Acting Sec'y	"
496	Minutes of the 16th Agena-B Coord. Board, dated 19 Dec. 1961, J.B. Mahon, Acting Sec'y	"
497	Minutes of the 17th Agena-B Coord. Board, dated 6 Feb. 1962, J.B. Mahon Acting Sec'y	"
498a	Cover letter, dated 14 Nov. 1958, from L.L. Lemnitzer, General, U.S. Army to Mr. Hjernevik, NASA attaching detailed plan, "Army <del>Plan</del> Plan for Implementing NASA Proposal for Transfer of JPL from Army to NASA."	Files
498b	Document, "Army Plan for Implementing NASA Proposal for Transfer of JPL from Army to NASA," dated 14 November 1958.	"
499a	News Release from Department of Defense dated Dec. 3, 1958, entitled, "DEFENSE DEPARTMENT, NASA AGREE ON USE OF ARMY SPACE RESOURCES, (Joint Release by Department of Defense and National Aeronautics and Space Administration)"	"
499b	NASA Document dated Dec. 3, 1958 entitled, "Fact Sheet on the Transfer of Certain Facilities from Department of Defense to the National Aeronautics and Space Administration and NASA-Army Agreement on Use of ABMA facilities."	"
499c	Release from James C Hagerty, Press Sec'y to Pres., dated Dec. 3, 1958 stating that the President an Executive Order this date transferring JPL from Army to NASA.	"
499d	Executive Order, dated Dec. 3, 1958 from Pres. Eisenhower, "Transferring Certain Functions from the Department of Defense to the National Aeronautics and Space Administration."	" part of C

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501	<u>Assault on the Unknown</u> , The International Geophysical Year Walter Sullivan, McGraw-Hill Book Company, Inc. Copyright 1961	Library 550 S
502	Homer E. Newell, Jr. <u>Sounding Rockets</u> McGraw-Hill Book Company, Inc. New York Toronto London 1959	<del>xx</del> Library 629.13338
503	<u>The Next Ten Years in Space 1959-1969: Staff Report of the Select Committee on Astronautics and Space Exploration</u> , U.S. Government Printing Office Washington: 1959	Library <del>131495</del> <i>files</i>
504	<i>get from gen. room</i> <u>National Academy of Sciences-National Research Council Washington, D.C. 1962, Publication 1079 A Review of Space Research</u> The Report of the Summer Study conducted under the auspices of the Space Science Board of the National Academy of Sciences at the State University of Iowa, June 17-August 10, 1962	Library <del>102150</del> <i>shelf</i>
505	Request for Proposal (RFP) sent to RCA Astro Electric Div. at Princeton, N.J. to the Attention of D. L. Gunter Subject: Lunar Capsule Study, RFP (Feb. 9, 1960)	Files
506	Letter <del>xxxRCA</del> from RCA to JPL Contract Administrator Frank McKibbin, subject: Letter Contract 950137, enclosing RCA Technical Proposal, Management Proposal and Capabilities Proposal	Files
507	<del>Letter to RCA from JPL dated Dec. 18, 1961 giving personnel to be contacted at JPL in the technical and contractual areas.</del> (August 25, 1961) dated Dec. 18, 1961 giving personnel to be contacted at JPL in the technical and contractual areas.	FILES
508	<del>Rough Draft of Report of the JPL-UCLA Group, Robert Jastrow, Director, Goddard Institute for Space Studies, Harper &amp; Row, New York, Evanston, and London, 1967</del> <u>Red Giants and White Dwarfs</u> , Robert Jastrow, Director, Goddard Institute for Space Studies, Harper & Row, New York, Evanston, and London, 1967	<del>523 J-1</del> Files <del>xxxx</del> Library
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519	IOM To B.O. Sparks from J.D. Burke, 7-20-60, Subject: Visit by Dr. Glennan	Files/JD Burke
520	Minutes of Lockheed - JPL Meeting at JPL, Jan. 21, 1960	Files/JD Burke
521	IOM, To J.D. Burke from C.G. Pfeiffer, Subject: History of the Atlas/Agena Trajectory Management Problem 1/16/61	Files/JD Burke
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<del>559</del>	<del>IOM dated May 1, 1961 to B. Sparks from J.D. Burke, Ranger Project Status Report No. 4</del>	<del>Files/J.D. Bu</del>
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562	IOM dated July 14, 1960, to J.D. Burke from V.C. Clarke Subject: RA-3, 4, 5 Performance	Files/J.D. Bur
563	IOM dated 2-16-61 to H.M. Schurmeier from J.D. Burke, Subject: RA-3 Weight Situation	Files/J.D. Bur
564	Ranger Project Organization Chart as of Sept. 20, 1963	Files
565	Technical Memorandum No. 33-4, <u>Scientific Experiments</u> <u>for Rangers A-1 and A-2</u> , JPL March 18, 1960	Library
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578	US Army Ordnance Missile Command, <u>Satellite &amp; Space</u> <u>Program Progress Report for NASA</u> , 18 November 1958, Report for October 1958	Library-CDC
579a	Space Technology Laboratories, Inc., <u>1958 NASA/USAF SPACE</u> <u>PROBES (ABLE-1) FINAL REPORT</u> , Volume 1, Summary Prepared for Air Force Ballistic Missile Division Hdqrs ARDC Under Contract AF 04(647)-205 18 Feb. 1959	STL Library
579b	Space Technology Laboratories Inc., <u>1958 NASA/USAF SPACE</u> <u>PROBES (ABLE-1) FINAL REPORT</u> , Volume 2 Payload and Experiments	STL Library
579c	Space Technology Laboratories, Inc., <u>1958 NASA/USAF SPACE</u> <u>PROBES (ABLE-1) FINAL REPORT</u> , Volume 3, Vehicles, Trajectories and Flight Histories.	STL Library
580	Space Technology Laboratories, Inc. <u>HISTORY OF ATLAS ABLE-5A</u> <u>FLORIDA OPERATIONS</u> , October 1960, Compiled by J.L.H. Peck Able Project Historian <i>STL/TR-60-0000-02328</i>	" "
581a	Project Red Socks, letter from W.H. Pickering to L.A. DuBridge dated Oct. 25, 1957, no subject, concerning moon probe proposal. An enclosure with this letter containing project rational and developmental process.	<del>Pickering's f</del> <i>Files</i>
581b	Project Red Socks, (Formal proposal, JPL, CIT, Oct. 21, 1957)	<i>"shelf"</i>
582	Letter dated 29 December 1959, to Dr. W. von Braun from Don Ostrander, Major General, USAF, Director Vehicle Development Operations, NASA, Places Agena vehicle project under von Braun's direction as substitute vehicle for Vega, which was terminated.	Files
583	JPL Report No. 30-6, <u>The Vega Program</u> , August 3, 1959, Jack N. James, Editor.	<del>Library</del> <i>Files</i>
584	Technical Release No. 34-23, A Lunar Seismic Experiment, by Frank Press, Phyllis Buwalda, Marcia Neugebaur, April 21, 1960.	<del>Library</del> <i>Files</i>
585	JPL Publication No. 30-20, "Operational and Facility Requirements Tentatively Proposed for the NASA Deep Space Instrumentation Facility Located at Island Lagoon, Woomera Range, Australia." November 1, 1959.	<del>Library</del> <i>Files</i>

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<u>No.</u>	<u>Title</u>	<u>Location</u>
586	JPL Technical Release No. 34-10, " <u>Deep Space Communications</u> ," William D. Merrick, Eberhardt Rechtin, Robertson Stevens, Walter K. Victor, Jan. 29, 1960.	<i>files</i> <del>Library</del>
587	JPL Publication No. 30-21, " <u>A Description of Deep Space Net Facilities, Operations, and Capabilities</u> ," Justin R. Hall, 4 December 1959	<i>files</i> <del>Library</del>
588	JPL Publication No. 30-10, " <u>Space Science Seminar, Part I: General Introduction</u> ," Statler Hilton Hotel, LA, Aug. 5, 1959, Document dated Aug. 28, 1959	"
589	JPL Technical Release No. 34-38, " <u>Spacecraft Secondary Power Requirements during the Sixties</u> ," R.C. Hamilton and E.G. Laue, dated April 10, 1960.	"
590	JPL External Publication No. 647, " <u>Temperature Control in the Explorer Satellites and Pioneer Space Probes</u> ," by E.P. Buwalda, A.R. Hibbs and T.O. Thostesen, dated May 7, 1959.	"
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592	"U.S. Space Officials Rap Lack of Urgency," <u>Aviation Week</u> 11/23/59	FILES
593	"Unmanned Lunar Program to be Accelerated," <u>Aviation Week</u> 9/4/61	FILES
594	"Ranger 3 Flight Stirs Reliability Question," <u>Aviation Week</u> 2/5/62	FILES
595	"Unmanned Lunar Program to Aid Apollo," <u>Aviation Week</u> 7/2/62	FILES
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597	"Successive Failures Precipitate JPL Shakeup," <u>Aviation Week</u> 12/24/62	FILES
598	"How should a space lab be organized?" <u>Business Week</u> May 2, 1964	FILES
599	<i>see 2-1974</i> " <del>What the Moon Ranger couldn't see</del> ," <u>Saturday Review</u> , 9/5/64	FILES
600	"Still a Big Secret: Is the Moon a Mantrap?" <u>U.S. News and World Report</u> , Mar. 8, 1965	FILES
601	NASA document " <u>The Long Range Plan</u> ," (LRP-62), January 1962	<del>LIBRARY</del>
602	<del>JPL document</del> , "National Aeronautics and Space Administration Long Range Plan," Dec. 16, 1959	<i>CDC</i> "
603	Lockheed Missiles and Space Division document, LMSD-446175, "Agena Capabilities for NASA Missions," Dec. 9, 1959	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
604	Interim Report of the Survey Team Established to Investigate the Use of Agena for the National Aeronautics and Space Administration, 15 Jan. 1960 LAB-E01076	Library Shelf
605	Agena Study Report, Jet Propulsion Laboratory, Feb. 1, 1960 LAB-E1077	Library
606	Technical Memorandum No. 33-9, "Statement of Work for a Lunar Rough Landing Capsule," JPL Document, April 25, 1960, LAB- <del>E1079</del> E01079	"
607	JPL Document, Publication No. 31-2, Ten-Year Plan, LAB-E01188	-12/3/59 Files
608a	Agreement, dated Dec. 3, 1958, entitled, COOPERATIVE AGREEMENT ON THE JET PROPULSION LABORATORY BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND THE DEPARTMENT OF THE ARMY.	FILES
608b	Agreement, dated Dec. 3, 1958, entitled, COOPERATIVE AGREEMENT ON THE ARMY ORDNANCE MISSILE COMMAND BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND THE DEPARTMENT OF THE ARMY.	"
<del>XXX</del> 609a	Cover letter dated May 18, 1959 from Herbert F. York, Dir. of Defense Research and Engineering, DOD, to T.K. Glennan enclosing staff study recommending against the scheduled transfer of CENTAUR to NASA on 7/1/59.	"
609b	Letter dated 5/7/59 from T.K. Glennan to D.A. Quarles submitting recommendations for Saturn transfer.	"
609c	Letter dated 5/6/59 from T.K. Glennan to D.A. Quarles submitting suggestions for the Centaur transfer.	"
610a	Letter dated Nov. 18, 1958 from L.L. Lemnitzer, DOD, to W.L. Hjernevik of NASA attaching copy of "Plan for Utilization of AOMC [ABMA] Resources by NASA."	"
610B	Document, dated 18 Nov. 1958, entitled, "Plan for Utilization of AOMC [ABMA] Resources by NASA."	"
611a	[1958] Joint Statement by Dubridge and Pickering regarding transfer of JPL from Army Ordnance to NASA.	"
611b	[1958] Statement by Pickering <del>xxx</del> regarding above transfer and saluting the Army and welcoming new association with NASA.	"
612	Memorandum for Record, Nov. 12, 1958, Subject: Second meeting with Army representatives to discuss NASA proposal for transfer of JPL and <del>Abma</del> ABMA.	"
613	Memorandum for Record, Nov. 15, 1958, Subject: Discussion with Army with Army reps on Nov. 15 of "Army Plan for Implementing NASA Proposal for Transfer of JPL from Army to NASA," dated 11/14/58.	"
614a	Memo for the Record, Nov. 15, 1958, Subject: Third Meeting with Army reps to discuss NASA proposal for transfer of JPL and ABMA.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
614b	TWX, dated 11-4-58, from T.K. Glennan to W.J. Hjernevik, requesting Hjernevik and Abbot to call Lemnitzer signifying their avialability to discuss and clarify issues based on original letter to Secretary and paper an implementation as well as counter proposal.	Files
615a	Letter dated Nov. 28, 1958 from D.A. Quarles to T.K.Glennan, states that consideration is being given the proposals made in Oct. 15, 1958 letter regarding ABMA and JPL transfer to NASA. Also states that they are going aheadwith preparation of the required Executive Order to carry this out.	"
615b	Letter, Dec. 1, 1958, T.K. Glennan to N.H. McElroy expressing appreciation of cooperative spirit of members of his staff in working out this problem. Also advises McElroy of the receipt of letter dated Nov. 28 [above] relating to proposed transfer to NASA of JPL and part of ABMA.	"
616a	Draft of Executive Order, dated 11-26-58, entitled, TRANSFERRING CERTAIN FUNCTIONS FROM THE DEPARTMENT OF <del>REX</del> DEFENSE TO THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.	"
616b	Letter dated <del>24 Nov.</del> 26 November 1958 from J.A. Johnson, General Counsel to W.F. Finan of the Bureau of Budget, stating acceptance of the draft of the Executive Order relating to transfer of the JPL to NASA. <del>aka</del> <del>akakexkhat</del>	"
617	Letter, dated Oct. 15, 1958, from T.K. Glennan to Neil H McElroy in which Glennan reviews what has been done so far in transfer of <del>ex</del> functions and facilities from DoD to NASA. He also tells of what is planned for the future and goes on to identify the capabilities required by NASA. He requests assistance from DoD in establishing agreements on methods of effecting transfers without weakening the defense effort.	"
618	Document from <del>Ex</del> NASA dated Oct. 15, 1958, entitled, SUGGESTED PROGRAM FOR IMPLEMENTATION OF PROPOSAL MADE TO THE HONORABLE NEIL H. MC ELROY THE SECRETARY OF DEFENSE ON OCTOBER 15, 1958.	"
619	Letter from J.B. Medaris dated 14 November 1958 to T.K. Glennan acknowledging receipt of JBL Proposal for a Space Flight Program Study.	
620a <i>missing</i>	Letter, dated Nov. 7, 1958, from V.C. Larsen Jr of JPL to Abe Silverstein of NASA enclosing two copies of proposal entitled, "Proposal for Space Flight Program Study."	"
620b <i>missing</i>	Letter, dated Nov. 11, 1958 from V.C. Larsen Jr of JPL to Ralph E Cushman of NASA enclosing the above proposal.	"
620c	Proposal, dated Nov. 7, 1958 from JPL prepared for NASA, entitled PROPOSAL FOR SPACE FLIGHT PROGRAM STUDY.	"

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No.	Title	Location
621 <i>missing?</i>	Ranger Project Development Plan, May 24, 1961 [Revised 5 July 1961]	<del>RR Widfo</del> <i>Cargill's office</i>
622	United States Congress, Senate, <u>NASA Authorization for Fiscal Year 1964</u> Hearings before the Committee on Aeronautical and Space Sciences, 88th Congress, First Session on S. 1245, Apr. 24, 25, 26, 29 and 30, 1963, Part 1 Scientific and Technical Programs.	<del>RR Widfo</del>
623	<u>Preliminary Design Study for a Soft Landing Lunar Instrument Capsule</u> NSL 62-95, June 1962, Northrop Space Laboratories, 1111 E. Bway, Hawthorne, California.	NASA Archives
624	Proposal, Ranger Spacecraft System, Phase II, Vol. 2, Cost Proposal Northrop Corp, Due on or before 10 June 1963, NSL 63-89, June 1963	"
625	Proposal, Ranger Spacecraft System, Phase II, Vol. 1, Management-Technical Northrop Corp., Due on or before 10 June 1963, NSL 63-89, June 1963	"
626	Management and Financial Report, Phase II Ranger Spacecraft Systems August 1963, Contract No. 950591, NSL 63-183, Sept. 1963, Northrop Space Laboratories	"
	Ranger Program. Management and Financial Report, Ranger Spacecraft Systems for October 1963, JPL Contract 950591, NSL 63-267, Northrop Space Labs.	"
628 <i>628 21</i> <i>634</i>	MMI 37-1-1A April 29, 1964, Conduct of Space Science Program--Selection and Support of Scientific Investigations and Investigators <i>Ford letter</i>	Files
629	Technology Utilization Review and Analysis, Final Report, Vol II, NSL 64-192 September 1964, Northrop Space Laboratories.	NASA Archives
628	Proposal, Block V Ranger Landing System, Part 1 of 3--Development Plan Publication No. P-130141(U), from Ford Motor Co. to Northrop Space Labs. dated 29 May 1963. <i>Cover letter in file</i>	"
630	Philco Corp., Aeronutronic Div. document "A Lunar Surface Hardness and Facsimile Capsule, 26 August 1964	"
631	Proposal, dated 19 May 1961 from Aeronutronic, A division of Ford Motor Co. "Electro-Optical Device" Publication No. P-11001 (U) <i>Memo</i>	"
632	Aeronutronic Div. of Ford Motor Co., 5 April 1961, "Proposal for Lunar Capsule Extensions, Publication No. P10631(U).	"
633	<del>XXXXXX</del> Proposal, from Ford Motor Co., Aeronutronic Division, dated 30 Oct. 1962, "Development of a Lunar Surface Photoreconnaissance Capsule (LSPC) Phases I and II, <del>XXXX</del> Publication No. P-12412(U)	"
	"Proposal for Lunar Capsule Extensions," 5 April 1961, Publication No. P10631(U), Aeronutronic Division of Ford Motor Co.	"
635	Proposal for "Lunar Surface Photoreconnaissance and Lunar Surface Measurement Capsules," 5 Feb. 1962 from Aeronutronic Div., Ford Motor Co.	"



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<u>No.</u>	<u>Title</u>	<u>Location</u>
36	Proposal for a Design Study of a Lunar Capsule, Publication No. P10320(U) dated 15 Feb. 1960 from Aeronutronic, A Div. of Ford Motor Co.	<del>Book</del> <del>NASA</del> <del>Archives</del>
<del>636</del> 637	Proposal Lunar Surface Measurement Capsule (SURMEC), Vol. II of II Management Proposal, Publication P-130136(U), Ford Motor Co., Aeronutroic Division, 1 June 1963.	NASA archive
638	Proposal for a Design Study of the Ranger Lunar Orbiting Spacecraft, Publication No. P10671(U), 5 April 1961, Aeronutronic Div. of Ford Motor Co.	"
639	Proposal "Lunar Facsimile Capsule (LFC), Vol I of II, Technical Proposal 1 June 1963, Pub. No. P-130137(U), Ford Motor Co., Aeronutronic Div.	"
640	Proposal "Lunar Facsimile Capsule (LFC), Vol II of II, Management Proposal 1 June 1963, Pub. No. P-130137(U)	"
641	Wesley Marx, "Pentagon and Campus, The Sullen Marriage," <u>The Nation</u> , May 18, 1964, pp. 499-501.	Files
642	Albert R. Hibbs, "A New Look at the Moon," <u>Engineering and Science</u> , June, 1960.	"
643	W. Jakobowski, Memorandum to File, Subject: Ranger Power Budget and RCA Funding Status, August 2, 1962.	"
644	Letter, H. M. Schurmeier, JPL, to N. W. Cunningham, NASA, regarding RCA vidicon situation and problems, August 21, 1963.	"
645	Memorandum from N. W. Cunningham to Oran W. Nicks, "RCA vidicon Status report for use at the AA Project Status Review," September 9, 1963.	"
646	Memorandum for Chairman, Space Science Steering Committee, from N. W. Cunningham, "Scientific Experiments for Ranger Missions P-53, P-54, P-55, and P-56," April 18, 1962.	"
647	Summary Minutes: Space Sciences Steering Committee, April 23, 1962.	"
648	Memorandum for Director, Office of Space Sciences, from N. W. Cunningham, Subject: "Experiments and Experimenters for Ranger Follow-on Missions P-53 through P-56," April 26, 1962.	"
<del>649</del> 649	Memorandum, NASA, no author indicated, Status of Ranger Blk V, June 3, 1963.	"
650	" <u>Ranger Program Chronology</u> ," Draft, N. W. Cunningham, April 22, 1964.	"
651	Lunar Science Chronology, "Working Group on Lunar Explorations," N. W. Cunningham, January 15, 1965.	"
652	Lunar Science Chronology, "Lunar Sciences Subcommittee," M. R. G., draft January 15, 1965.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
653	Memo to Ranger Files, N. W. Cunningham, "Ranger B Chronology since the Launch of RA-VI," July 17, 1964.	Files
654	Memorandum to Ranger Files, same as above, duplicate.	"
655M	Memorandum to Program Directors, NASA Headquarters Directors, Field Centers, from T. Keith Glennan, "Decontamination and sterilization Procedures for Lunar and Planetary Space Vehicles," December 23, 1960.	"
656	Letter, W. H. Pickering to H. E. Newell, subject: "Lunar Spacecraft Sterilization," November 2, 1962.	"
657	Interoffice Memo, J. D. Burke to All Concerned, subject: "Sterilization," November 6, 1962.	"
658	Memorandum for The Administration, Deputy Administrator, Associate Administrator, from H. E. Newell, subject: "NASA Sterilization Policy," January 15, 1963.	"
659a	Cover memo, Schurmeier to F. E. Goddard, "Summary of Ranger Sterilization Experience, April 5, 1963.	"
659b	Interoffice memo from Ranger Project Office to Dr. F. E. Goddard, "Ranger Sterilization Experience," April 5, 1963.	"
660	Minutes, Experimenters Meeting, Ranger VII, Lunar and Planetary Laboratory, U of Arizona, Oct. 23-24, 1964.	"
661a	Summary of Ranger Experimenters Meeting Held January 28, 1963, by Harold Washburn, Feb. 6, 1963.	"
661B 662b	Experimenters Meeting Minutes, January 15, 1965	"
662	Minutes, Ranger TV Experimenter Meeting, January 28, 1963	"
663	Gerard P. Kuiper, "Preliminary Determination of the Bearing Strength of the Floor of the Crater Alphonsus. n. d., 1965?	"
664	Minutes of Ranger Experimenters Meeting at JPL, May 12, 1965.	"
665	T. Vrebalovich, Letter to Ranger Experimenters, Jan. 29, 1965	"
666	Photograph of Ranger Spacecraft, December, 1959.	"
667	Memo to Files, from N. W. Cunningham, Subject: Atlas-Agena B Payload Experiment Meeting with JPL Personnel," January 18, 1960.	"
668	Letter, W. H. Pickering to Dr. G. Shilling, instrumentation for Rangers 1 and 2, January 20, 1960	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
669	Letter, Silverstein to Pickering, Instrumentation for Rangers 1 and 2, January 26, 1960	Files
670	See bottom of page.	"
671	Letter, Pickering to Dr. G. F. Schilling, Experiments for Rangers 3, 4, and 5, May 5, 1960.	"
672	Letter, Burke to Cortright, Vela Hotel for Ranger Blk II; September 9, 1960.	"
673	<del>Memo for Director, Office of Space Flight Programs, from R. C. Seamans, Jr., Subject: Approval of Preliminary Project Development Plan for Ranger Follow-on Flights, August 11, 1961.</del>	2-1139 "
674	Memo for Record, Subject: Performance Characteristics of RCA TV System Proposed for Ranger Follow-on Missions, August 1, 1961.	"
675	Memo for the Administrator, Subject: Ranger 1 (P32) Flight Status Report [#1], August 23, 1961.	"
676	Memo for the Administrator, same as 675, Status Report No. 2, August 24, 1961.	"
677	Same as above, Status Report No. 3, August 25, 1961	"
678	Memo for the Record, Charles P. Sonzetti, Subject: Trip Report, August 15, 1961 JPL - Ranger Follow-on, August 25, 1961.	"
679	Memo for the Administrator, same as 675, Status Report No. 4, September 1, 1961	"
680	Memo for Director, Office of Space Flight Programs, from E. M. Cortright, Subject: "Ranger Follow-on Proposals," Sept. 18, 1961.	"
681	Letter, R. Davies to W. Cunningham, radiation experiments for Blk III Rangers, October 4, 1961.	"
682	Memorandum for Director, Office of Space Sciences, from N. W. Cunningham, Subject: "Additions to the Experiments and Experimenter List for Ranger Missions P-34, P-35, and P-36," Dec. 1, 1961.	"
683	Letter, Nicks to Burke, Bus experiments for RA 6-9, March 20, 1962.	"
684	April 13, 1962. Letter to Cunningham from Burke, Bus Experiments for Ranger 6-9.	"
685	Letter, Cummings to Nicks, Contracting for further Ranger spacecraft Busses, April 16, 1962.	"
670	<del>Letter, Cunningham to Schurmeier, Block III &amp; IV Objectives, March ? 1963.</del>	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
686	Letter, Silverstein to Pickering, Follow-on Ranger programs in support of Apollo, June 9, 1962 <i>1961 same as 2-350</i>	Files
✓ 687	Letter, Pickering to Seamans, Subject: Ranger Project Activities in Support of Manned lunar Flight Program, August 15, 1962	"
688	Memo to Chairman, Space Sciences Steering Committee from N. W. Cunningham, Sub: Non-Visual Bus Experiments for Ranger Follow-on Missions," August 23, 1962.	"
689	Memo for Director, Lunar and Planetary Programs, from N. W. Cunningham, Sept. 6, 1962, RA Mission Plans after RA-14.	"
690	NASA News Release, No. 62-212, "Ranger III Radiation Measurement Results, Oct. 15, 1962.	"
691	Letter, Frank Press to Homer Newell, request for more Ranger hard-landers, Oct. 22, 1962.	"
692	Memo for the Administrator from H. E. Newell, Sub: Ranger 5 Post Launch Report No. 2," Oct. 30, 1962.	"
693	Letter to Frank Press from H. E. Newell, re, 2-691, November 2, 1962.	"
694	Memo, Walenta to Meghreblian, Subject: "Ranger 7, 8, & 9 Scientific Instruments," November 21, 1962.	"
695	Memo for Director, Office of Space Sciences, from N. W. Cunningham, Sub: Non-visual bus experiments on Rangers 6-9," February 15, 1963.	"
696	Memorandum for Director, Office of Space Sciences, from N. W. Cunningham, Subject: "Payload recommendation for Block V/ IV of Ranger Program," March 15, 1963.	"
697	<del>Letter, N. W. Cunningham to H. A. Schurmeier, Objectives for Ranger Block IV, April 8, 1963.</del> <i>See 2-1380</i>	"
698	Memorandum, Cunningham to Nicks, Subject: "Block IV Ranger Non-visual Hardware Review," April 12, 1963.	"
699	Memorandum, Cunningham to Newell, Subject: "Payload Recommendations for non-visual bus experiments on Ranger Block IV," April 19, 1963.	"

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No.	Title	Location
700	<del>Letter, Cunningham to Schumacher, Objectives of Ranger Blocks III and IV, March 1963,</del> Proposal, "Lunar Seismometer Capsule, Vol. I of II, Technical Proposal dated 1 June 1963, Publication No. P-130138(U), Ford Motor Co. Aeronutronic Division.	<del>Files</del> NASA INARS Archiv
701	Document from Ford Motor Company, Aeronutronic Division, "A Lunar Surface Measuring Capsule, dated 8 Jan. 1962, Publication U-1509	NASA Archiv
702 a+b	Proposal for Development of a Lunar Capsule, <sup>Volume I, Development Plan and</sup> Volume II, Organization and Capabilities, Publication No. P. 10610 (U) 15 April 1960 prepared under Contract <del>M4824</del> M48024, Aeronutronic, A Division of Ford Motor Co.	Shelf
703 a+b	<sup>Design Study</sup> <del>Proposal for Development of a Lunar Capsule,</del> <sup>Vol. I Final Report and</sup> Volume III, Contractual and Cost Summary, Publication No. P10610(U), 15 April 1960 prepared under Contract M48024, Aeronutronic, A Division of Ford Motor Co.	Shelf Lib
704	Proposal, "Lunar Capsule Extensions Vol. III - A,B,C,D, and E of III Appendices - Informal Technical Memoranda, Publication No. P. 10631(U) 5 April 1961, Aeronutronic, A Div. of Ford Motor Co.	NASA
<del>XXX</del> 705	Proposal, "Summary of Ranger Payloads," Publication No. P-130139(U) 1 June 1963, submitted to OSS, NASA	Files
706	Pages 30-36A of the Aug. 14, 1964 issue of Life, article entitled, "The Contraption that Reconnected the Moon."	Files
706a 07	<sup>First flight and mission and results for</sup> Pages 62-68 of the June 27, 1960 issue of Aviation Week, article entitled "Vega Study shows Early NASA Problems." by Evert Clark	"
708 a-e	Memo, Cunningham to Seaman, "Weekly Status Report No. 2, Ranger Program," May 1, 1963. <i>all Weekly Status Reports, Ranger</i>	2-708
709	<del>Same as 708, No. 5, May 20, 1963.</del>	"
710	Letter, Aeronutronic to NASA, "Proposal for Ranger Hard Landing Capsule, May 29, 1963.	"
711	Letter, JPL to NASA, "Proposal for four scientific experiments for Ranger Block V program, May 31, 1963	"
712a	Letter, US Naval Research Lab, Propos 1 for a scientific experiment for range Block V, May 31, 1963	"
712b	<del>Letter proposal, G.E. column, PCA to Cunningham, NASA, Ranger Block II Payloads</del>	"
713	<sup>and getting proposal, May 31, 1963</sup> "Agreement on Principles for Operating the JPL by Caltech," Dec. 15, 1958	"
-714	Office Memo dated May 9, 1959 to Dr. Silverstein, via A. Hyatt from M.W. Rosen, presenting a simple, direct plan for obtaining photos of the moon.	"
715	Memo, Cunningham to Seaman, Ranger Status Report No. 10, June 26, 1963	"
716	Letter, Pickering to Newell, Schedule slippage of Block IV, June 27, 1963	"
* 703a	Design Study for a Lunar Capsule - Final Report Publish U-87. Contract M48024 15 Apr, 1960 Aeronutronic, Div of Ford	Books

714a Memo, MW Rosen, NASA to G. Schumacher, Reviewer, to memo of 5/14/59.

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<u>No.</u>	<u>Title</u>	<u>Location</u>
717	Memo to File from Michael R. Gill, Subject, Planetology Subcommittee Recommendations for Block V Payload, July 11, 1963.	Files
718	Memo for File, N. W. Cunningham, Subject: "Range Review with Associate Administrator, July 12, 1963.	"
719	Memo for the Record, E. H. Cortright, Subject: "Some comments on the NASA reorientation of the Ranger Programs, July 15, 1963.	"
720	Memo, Newell to Seamans, Ranger Status Report No. 13, July 17, 1963	"
721	Memo, Cunningham to Newell, "TV experimenters for Ranger Block III, July 19, 1963.	"
722		
723	Memo for Files, Michael R. Gill, Subject: "Ranger Block V Proposals," 8/20/63.	
724	Memo, Newell to Seamans, Ranger Status Report No. 17, August 29, 1963.	"
725	Same as above, No. 18, Sept. 18, 1963	"
726	Memorandum, Newell to Nicks, Subject: "Payload Approval for Initial Ranger Block V Missions," Sept. 18, 1963.	"
727	Memo, Newell to Seamans, Ranger Status Report No. 20, Oct. 11, 1963	"
✓728	Letter, Newell to Pickering, Decem. 13, 1963, Cancellation of Ranger Block V, D	Missing from file + catalog
729	Draft of Memo by Oran Nicks, "Ranger Block V Cancellation," no recipient indicated, January 21, 1964.	"
730	Telephone Conference Report by N. Newell, concerning conversation with Robert Cowen, Christian Science Monitor, January 6, 1965.	"
731	Letter, Cunningham to Shurmeier, 3/13/63, Ranger Block III and IV Objectives	Missing from file + catalog
732	Minutes from Ranger Experimenter Meeting, January 8, 1964, by T. Vrebalovich, Jan 24, 1964.	"

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733	The National Program for Lunar and Planetary Exploration, A.R. Hibbs Technical Release No. 34-241, for Presentation at Pacific Southwest Regional Meeting, American Geophysical Union Jan. 26 and 27, 1961 at Berkeley, California	Files
734	Draft of Chapter IV. SPACE SCIENCE AND APPLICATIONS, William R. Corliss August 23, 1968	"
735	Missiles and Rockets, Mar. 1, 1965, "Ranger IX May Shoot Surveyor Site."	"
736	Missiles and Rockets, Apr. 5, 1965, "Ranger Program Exceeds Expectations."	"
738	Science, Mar. 6, 1964, "JPL: Ranger VI Failure Increases Speculation on Jet Lab's Future Links with Space Agency, Caltech."	"
738	Science, May 15, 1964, "Ranger: Oversight Subcommittee Asks Why NASA Doesn't Prevail on JPL to 'Rigidize' Projectwise."	"
739	New York, May 8, 1965, "Moon Men."	"
740	Aviation Week, Mar. 18, 1963, <del>"McNamara Announces Criticism of JPL"</del> "Northrop Ranger Award."	"
741	Aviation Week, July 29, 1963, "Three Ranger Hard-Landing Flights Eliminated; Four Others Delayed."	"
742	Aviation Week, Oct. 30, 1961, "Ranger 2 Postponed."	"
743	Aviation Week, Nov. 23, 1959, Editorial, "Do we have a Space Program?"	"
744	<del>Annals</del> Apollo's Minions, (submitted for consideration in the Goddard Historical Essay Competition, <i>Oct. 1967</i> )	"
745	Ranger VII Post-Impact Press Conference, July 31, 1964	"
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754		Missiles and Rockets, June 20, 1960, pages 19020, "Vega-Agena-B Mix-up cost Millions." <i>Paul Means</i>	"
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757		<u>Program Review, Space and Applications Management</u> , June 22, 1967, presented by OSSA and published by Program and Special Reports Executive Secretariat	Files
758		Interview with Don Pedretti, Oct. 13, 1967 <i>Astronautics and Aeronautics, Jan. 1968, "Ranger - On the Upward Trail," W. H. Pickering</i>	"
759		Interview with Val <del>Larsen</del> <i>Larsen</i> , May 28, 1968	"
		Interview with Walter Jakobowski, 8/26/68	"
761		Interview with Oran Nicks 8/26/68	"
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774	Feb. 10, 1964 Aviation Week, p. 24 "Legislators Back NASA on Ranger"	"
775	Feb. 17, 1964, Missiles and Rockets, p. 16, "Space Agency wants JPL to Reorganize:"	"
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IOM No. 14 dated 12/11/59, from W.H. Pickering to All Personnel, Subject: Cancellation of the VEGA Program. ~~xxxx~~

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802

Letter, dated 12/14/59 from Dr. Pickering to Dr. Silverstein, establishing a policy for the design of flight instrumentation which involves scientists from other organizations.

"

803

Letter, dated 12/17/59, from Dr. Pickering to Dr. Silverstein, listing the functions to be performed by a scientific advisory group on lunar and interplanetary exploration. Also, he recommends individuals for additional membership of this group.

"

804

TWX, dated 12/14/59, to George Green, CALTECH, confirming oral understanding between DR. Pickering and T.K. Glennan terminating work on VEGA as of Dec. 11, 1959., TWX is from R.E. ~~xxxx~~ Cushman, NASA Contracting Officer.

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TWX Draft, dated Dec. 4, 1959, of Program schedule for Lunar and Planetary Missions, and Payload Objectives and Content.

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<u>No.</u>	<u>Title</u>	<u>Location</u>
806	Notes of Meeting with Representatives of BMD - STL, April 7, 1959	Files
807	Memo for: Director of Space Flight Development, dated 28 May 1959, from T. Keith Glennan, subject: Operational Framework of JPL Responsibilities for the Vega Vehicle.	"
808 <sup>a</sup> 808 <sup>b</sup>	Memo for the Chairman, Civilian-Military Liaison Committee, dated 21 July 1959, from T. Keith Glennan. <sup>(b)</sup> Attachment to memo is the Minutes of the July 14, 1959 meeting.	"
809	Report to the Administrator, NASA, dated Aug. 31, 1959, from the Ad Hoc Vega-Centaur Vehicle Review Group (signed by Homer J. Stewart)	"
810	Memo for the Administrator, dated Sept. 28, 1959, from Homer J. Stewart, Director, Office, Program Planning and Evaluation, Subject: Background Information on the Agena Program.	"
811	Memo to the Administrator, dated Oct. 2, 1959, from Homer J. Stewart Subject: Considerations of Vega, Agena B and Centaur.	"
812	Memo to the Administrator, dated Oct. 2, 1959, from Homer J. Stewart Subject: Centaur Development Schedule.	"
813	Memo to Mr. Horner, dated 15 <del>Oct</del> October, 1959, from T. Keith Glennan re Air Force action in launching the BOLD ORION toward Explorer VI.	"
814	Minutes of meeting of 13 Oct. 1959, Civilian-Military Liaison Committee	"
815	Letter, dated November 20, 1958 to Dr. T.K. Glennan from Dr. Pickering regarding working relationship and division of responsibility between JPL and ABMA	"
816	Letter, dated Dec. 10, 1958 to Albert Siepert, Director of Business Admin. from V.C. Larsen, Jr., Subject: Proposal for the Development of a 6000 Pound Thrust Storable Liquid Propulsion System.	"
817 <sup>a, b, c</sup>	Letter, dated January 22, 1959, to T.K. Glennan, NASA from W.H. Pickering discussing "Agreement on Principles for Operating the Jet Propulsion Laboratory by the California Institute of Technology."	"
818	Letter, dated January 27, 1959 to T.K. Glennan from Dr. W.H. Pickering discussing the handling of scientific data resulting from experiments.	"

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<u>No.</u>	<u>TITLE</u>	<u>LOCATION</u>
9	Vega Letter Report No. 1, July 31, 1959	CDC
820	Letter dated Aug. 11, 1959 to Mr. A. Hyatt NASA, from Dr. Pickering, Vega Letter Report.No. 2	
821	Letter dated Aug. 18, 1959 to Mr. A. Hyatt NASA, from Dr. Pickering, Vega Letter Report No. 3	"
822	Letter dated Sept. 1, 1959 " " " " C.I. Cummings Vega Letter Report No. 4	"
823	Letter dated Sept. 30, 1959, to Mr. A. Hyatt, NASA, from <del>Dr. Pickering</del> C.I. Cummings Vega Letter Report No. 6	"
824	Letter dated Dec. 11, 1959 to Mr. A.O. Tischler, NASA, from A. Briglio Jr. which is a summary of <del>xx</del> recent progress on the 6K propulsion System Development Program.	"
825	Letter dated Aug. 4, 1959 to NASA, att: Dr. Silverstein from Dr. Pickering stating revised missions and schedule for the Vega vehicle.	"
826	Letter dated Apr. 9, 1959, to Dr. Glennan, Administrator of NASA from DR. Pickering, summarizing the situation regarding launching pads at AMR.	"
827	Letter dated Feb. 3, 1959 to Dr. A. Silverstein from W.H. Pickering, JPL proposing NASA consider several <del>xxx</del> Atlas Able flights.	Files
828	Conference Summary, NASA Headquarters, 6 and 7 Feb. 1959, C.I. Cummings establishing Vega management responsibilities, dated Feb. 9, 1959	"
829	Letter dated Feb. 26, 1959, from V.C. Larsen Jr. to Dr. R. Jastrow, NASA <del>xxxxxxxxxx</del> enclosing two memoranda summarizing proposals for scientific packages to be carried on lunar missions.	"
830	TWX dated Mar. 23, 1959 to T.K. Glennan from Pickering, notifying NASA Hq that JPL would commence formal work on the Vega Program Mar. 30.	"
831	Letter, dated Mar. 24, 1959, to Glennan from Pickering, amplifying on the <del>xx</del> TWX of the previous day.	"
832	JPL, Vega Mgmt Doc. #6, dated Apr. 7, 1959, designating positions and the men to fill them.	"
833	Letter, dated Apr. 29, 1959, to Dr. glennan from Pickering, recommending combined systems management responsibility for both Vega and Centaur at JPL.	"
834	Letter, dated May 11, 1959 to Glennan from Pickering, discussing a meeting held in San Diego at Canvair.	"
835	Letter dated July 10, 1959, to Dr. Silverstein from W.H. Pickering, telling of agreement between NASA and Air Force to make AMR Launch Complex 36 the Vega Stand.	"
836X	IOM from Pickering to Distribution dated 25 July, 1959, flight schedule for Vega"	
837	Letter dated July 31, 1959, to Dr. Pickering from R.E. Horner of NASA, notifying us of formation of ad hoc group to review Vega and Centaur.	

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<u>NO.</u>	<u>TITLE</u>	<u>LOCATION</u>
838	Letter dated Sept. 9, 1959, to Dr. Silverstein from C.I. Cummings, with a proposed "Flight Test Responsibilities & Organization for Launch Phase of the Vega Program at A R.	Files
839 <sup>28</sup>	IOM from F.E. Goddard to C.I. Cummings, dated Aug. 20, 1959, giving new tentative Vega flight schedule	"
840	Letter, dated Sept. 17, 1959, to L.C. Buckley, NASA from C.I. Cummings requesting tracking and telemetry coverage from the Bermuda station for Vega.	"
841	IOM dated Sept. 22, 1959, to <del>W.H.K</del> Distribution from C.I. Cummings, Subject: Vega Payloads.	"
842	IOM dated Oct. 5, 1959, to Distribution from J.D. Burke, Subject: S/C preliminary design.	"
843	Letter dated Nov. 9, 1959, to Dr. Silverstein from W.H. Pickering, giving results and advice as result of Dr. Silverstein's visit.	"
844	IOM dated Nov. 16, 1959, showing Vega S-1 S/C clock and quadrant system of orientation.	"
845	IOM dated Nov. 20, 1959, to Distribution from J.D. Burke, Subject: Sterilization	"
846	IOM dated Nov. 30, 1959, to Distribution from the Space Science Div., Subject: Vega Missions	"
847	Letter, dated Dec. 10, 1959, to E.C. Buckley, from C.I. Cummings giving latest plans for directions which Vega are to be fired.	"
848	IOM dated 4 June 1959, to Dr. Pickering from C.I. Cummings, Subject: Big Problems.	"
849	Letter dated Nov. 12, 1959, to Mr. A. Hyatt from C.I. Cummings, Subject: Engine Need Dates, Contract NASw-30	"
850	Letter dated Feb. 25, 1959, to Dr. Newell from Dr. Pickering, <del>xxx</del> regarding the CETEX setting up a code of conduct.	"
851	Letter dated April 14, 1959 to Dr. Silverstein from Dr. Pickering, regarding necessary <del>xx</del> facilities for carrying out the Vega Program at AMR.	"

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852	<i>see doc 2</i> <i>N.Y. &amp; London</i> <u>Progress in Astronautics and Aeronautics, Vol. 10, 1963, "Relationship Between the Manned and Unmanned Programs, Technology of Lunar Exploration, 971-974.</u>	Files
853	Memorandum to the Associate Admin, from G. Mueller, Assoc Admin. for Manned Space Flight and H.E. Newell, Assoc, Admin for Space Science and Appl., dated 9/27/65, Subject: Lunar Exploration Plan - Revised.	
854	Memorandum for Dr. Seamans, from James E. Webb, Administrator, dated March 25, 1964.	"
855	JPL Technical Memorandum No. 33-32 (Revision 1), <u>LUNAR PROGRAM, OPERATIONAL POLICY, ORGANIZATION AND FUNCTIONS</u> , C.I. Cummings, February 1, 1962	Library
856	RANGER D TARGET SELECTION, dated 3/8/65, plan presented to Homer Newell in Washington on 3/10/65 by H.M. Schurmeier.	Files
<del>857</del> 857	<i>cl</i> <u>A Photographic System for Close-up Lunar Exploration</u> , M.E. Davies, U.S. Air Force Project Rand Research Memorandum, RM-2183, The Rand Corp., 23 May 1958	"
858	<u>Ranger Technology Application Study</u> , Volume II [Final Report--Blk V status at cancellation] NSL 64-36, Feb. 1964, Northrop Space Labs.	Library
859	<u>NASA-INDUSTRY PROGRAM PLANS CONFERENCE</u> , July 28-29, 1960, A NASA document	"
860a	Letter, dated Oct. 30, 1964 to James Webb, NASA from Frederick Seitz of NAS, enclosing statement of SSB on "National Goals in Space"	Files
860b	Statement dated October 28, 1964, "Statement of the Space Science Board of the National Academy of Sciences on National Goals in Space 1971-1985.	"
861	Memorandum to Record, from SL/Director, Lunar and Planetary Programs O. Nicks, subject: Meeting with Advanced Planning Committee at Caltech January 12, 1965.	"
862	Letter, dated Oct. 8, 1959, to Dr. Pickering from A. Silverstein re sterilization.	"
863	Letter, dated Nov. 17, 1959, to Dr. Pickering from R.E. Horner regarding NASA-JPL coordination in improving communications.	"
864a	Letter, dated Aug. 14, 1959 to Dr. T.K. Glennan from Dr. DuBridge re: NASA JPL relationships.	"
864b	Letter dated Aug. 10, to Dr. DuBridge from Dr. T.K. Glennan, re: NASA JPL relationships.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
865	Letter dated November 20, 1959 from W.H. Pickering to R.L. Bell Director of Security Division at NASA, advising of activation of the <del>same</del> Space Science Division.	Files
866	Amendment No. 1, to Request No. HS-21, dated Dec. 19, 1958, from Ralph E. <del>Em</del> Cushman, Contracting Officer NASA, to: Commanding General <del>MR</del> Army Ordnance Missile Command, Huntsville, Ala., Subject: ORDXM-C [Construction of 8 upper stages for Juno II]	"
867	Letter dated Dec. 23, 1958, from W.H. Pickering to Dr. A. Silverstein regarding: recommendations by JPL of launching a 12 ft. sphere package with a JUNO II type vehicle. Also launching the NASA 100 ft. sphere was decided impractical.	"
868	Letter dated Aug. 13, 1959, to Dr. Pickering from T.K. Glennan, a thank you letter with regard to meeting of the Space Council members.	"
869	NASA, first or second evaluation of JPL, 1965	"
870	NAS, New Guide for Space Probe Sterilization, approx. Jan. 1963	"
871a	Letter from H. Odishaw, dated Sept. 14, 1959, to Dr. Glennan, Subject: Space Probe Sterilization. [Recommendations]	"
871b	Letter from Glennan to Odishaw (Oct. 14, 1959) answering above letter and cites actions taken to implement sterilization policy.	"
<del>872</del>	<i>See Biographical Information</i> Biographical Data on Oran W. Nicks, three pages, dated January 1968	"
873	Trip Report dated 13 Oct. 1958, from Glenn Crane Lt. Col. Spec. Asst to CG, to Commanding General ORDXM-X 1960	CDC
874	Agenda Study Report, JPL Feb. 1, <del>1960</del> , (Reorder No. 60-29)	"
875	Historical Perspectives on Apollo, Eugene M. Emme, <u>Journal of Spacecraft and Rockets</u> , 1968.	<i>Files</i>
<del>86</del> 876	<u>NASA 1965 Summer Conference on Lunar Exploration and Science</u> , Falmouth, Massachusetts, July 19-31, 1965 NASA SP-88	<i>Bookshelf</i>
877	<u>Proceedings of the Conference on Lunar Exploration</u> , Aug. 12 through 17, 1962, Bulletin of the Virginia Polytechnic Institute, Part A	<i>Library</i>
878	<u>Voyages to the Moon</u> , Marjorie Hope Nicolson, New York: The MacMillan Co. 1948	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
879	<u>Space Flight Operations Memorandum, Ranger VI, EPD-207, 27 Apr. 1964</u> by D.A. Nelson, Space Flight Operations	Burkes Files <del>Library</del>
880	<u>Ranger Block III Launch Constraints Planning Document, PD-18,</u> June 26, 1964, E. Travers	"
881	<u>Lunar Communications, Eberhardt Rechtin, Tech Memo No. 33-133,</u> June 28, 1963.	"
882	<u>Ranger VI Failure Analysis &amp; Supporting Investigations, EPD 205,</u> 27 March 1964, H.M. Schurmeier.	"
883	<u>Space Flight Operations Plan, Ranger 7, EPD-78 Rev. 4, 28 May 1964</u>	"
884	<u>Ranger Block III Launch Constraints Planning Document, PD-18,</u> Addendum No. 1, 17 July 1964, E.S. Travers	"
885	<u>Ranger Block III Mission Operations Plan, Ranger B (7), EzBz PD-20,</u> July 17, 1964	"
886	<u>Improving Organizational Structure and Administrative Processes</u> <u>Jet Propulsion Laboratory, Sept. 1959, McKinsey &amp; Co.</u>	Files
887	<u>Ranger VII, Special Report to Congress Aug. 4, 1964, NASA Document</u>	"
888	Office of Public Information Release entitled, "Project: Rangers C & D" February 4, 1965	"
889	NASA Issue of <u>Current News</u> , prepared by the Office of Public Information, dated Aug. 6, 1964.	"
890	<u>Test and Operations Plan (TOP), <del>Rafixix</del> Revision dated 25 Nov. 1963,</u> Ranger Block III	Burke's F
891	Office of Public Information Press Conference, Ranger VII Post-Impact, JPL Auditorium, July 31, 1964	Files
892 <del>890</del>	Office of Public Information, Ranger Press Kit [Block III] July 23, 1964	"
893	Office of Public Information Ranger A Press Kit [Block III, RA-6] January 26, 1964.	"
894 <i>now 2-173</i>	NASA Document, <u>Interim Scientific Results Conference, Ranger VII,</u> 28 August 1964	"
895	Research Report, <u>Foreign Media Reaction to Ranger 7, R-107-64, Aug. 5 '64</u> United States Information Agency	"
8965	JPL News Clips on Ranger 6. From Jan. 31, 1964 to Feb. 24, 1964	"



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<u>No.</u>	<u>Title</u>	<u>Location</u>
<del>897x</del> 897	Letter dated 10 April 1962 from Newell to J.E. Karth <del>going</del> going over the discussion held the previous day regarding the NASA space Science program.	Files
898	"Capsule Facts About the Moon," undated, put out by PIO	"
899a	IOM 14-64, dated Feb. 13, 1964 from Dr. Pickering to All Personnel, putting to rest rumors concerning the Lab. Enclosed are:	"
899b	Telegram from Webb dated Feb. 13, promising full support from NASA	"
899c	Statement from DuBridge, reiterating no <del>shaxx</del> shakeup in JPL management due. <del>xxx</del> n.d.	"
900	PIO release dated April 19, 1962, showing subcontractors for Block II (Rangers 3, 4 and 5.)	"
901	Ranger 9 Log from March 21 [1965] to March 24.	"
902	JPL News Clips prepared by PIO, <del>xx</del> Aug 1, 1964	"
903	News Release, dated April 19, 1962, "Ranger 4 Scientific Experiments"	"
904	Ranger VIII Post-Impact Press Conference, JPL Auditorium, Feb. 20, 1965.	"
905	Report to the President-Elect of the Ad Hoc Committee on Space, for release to press, radio and TV on Jan. 12, 1961, [Weisner Report]	"
906	<u>The National Observer</u> , Feb. 22, 1965, "Ranger 8 and the Great Moon Map Project."	"
<del>906</del> 907B	Ranger 7 Status Bulletins, From Number 1, 24 July 1964 to No. 11, 31 July 1964.	"
908	Reprinted from <u>Science</u> , Sept. 4, 1964, "Ranger Moon Pictures: Implications" by T. Gold.	"
909	Press Release from Office of Public Education and Information, dated April 19, 1962, "Ranger 4 Fact Sheet."	"
910	Press Release dated April 19, 1962, "NASA Key Personnel."	"
911	" " " April 19, 1962, "Ranger 4 Lunar Capsule Subsystem Weight Summary."	"
912	Press Release, <del>xxxxxxxxxxxx</del> 3/23/65, stating that NASA will test a new electronics system.	"
913	"Crater Alphonsus Facts," no date, source unknown.	"
914	<del>Press Release, dated Jan. 18, 1962, "Ranger 3 Spacecraft."</del> Magazine article	"
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907A RA-9 Status Report #10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

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No.	Title	Location
<del>914x</del> 915]	Press Release, dated Jan. 18, 1962, <del>Rx</del> "JPL Ranger Key Personnel" [Blk II]	Files
916	Press Release, Jan. 18, 1962, "NASA Key Personnel." [Block II]	"
917	"Ranger IV Technical Bulletin No. 1," 24 <del>Apr</del> April 1962	"
918	Press Release, Jan. 18, 1962, "Ranger Lunar Capsule Weight Summary"	"
919	<del>Rx</del> <u>Los Angeles Herald &amp; Express</u> , Aug. 29, 1961, "Warns on Space Race"	"
920a	<u>New York Times</u> , Aug. 30, 1961, "Ranger Project Adds 4 Rockets to Televis pictures of Moon."	"
920b	<i>Newsweek</i> , 9/4/61 re Ranger 1.	
921	IOM dated Nov. 6, 1958, from J.W. McGarrity to W.H. Pickering, Subject: Results of Brainstorming Session on Ideas for Laboratory's New Name.	"
922	"Space--The New Scientific Frontier," by W.H. Pickering, address before the American Institute of Chemical Engineers Annual Mtg in St Paul, Minn, Sept. 29, 1959.	"
923	IOM dated May 26, 1964 from Alex Bratenahl to H.M. Schurmeier, subject: "A Possible Cause of the Accidental <del>Turn</del> Turn-On of the RA-6 TV."	"
924	Ranger 6 Log [Jan. 30 to Feb. 2 [1964]	"
925	Ranger 7 Log July 28 to July 31, 1964.	"
926	JPL Space Programs Summary No. 37-17, pp. 28-36, D. Space Sciences Received at CDC on July 19, 1967.	"
927	JPL Ranger Key Personnel. 6/61	"
928	Subcontractors for Ranger Blk I, 6/61	"
929	Deep Space Instrumentation Facility, [1961?]	"
930	NASA Key Personnel in Ranger [1961]	"
931	Ranger Technical Bulletin No. 1 through 5, Aug. 24, 61	"
932a	Letter dated Mar. 31, 1961 from L.V. Berkner, Chairman of the <del>Nx</del> Space Science Board of NAS to Mr. Webb, enclosingx 2 policy positions:	"
932b	"Support of Basic Research for Space Science."	"
932c	"Man's Role in the National Space Program."	"
933	Chronology of Russian Lunok IV Shot	"
934	NASA News Release, Dec. 19, 1962, "Ranger Improvement Program."	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
935	Official Statement Released Yesterday about the REsults of Ranger 3 [1962]	Files
936	JPL News Clips, Feb. 15, 1962, "JPL Simulator to test Craft in Space Environs.	"
937	<u>New York Herald Trib.</u> , Jan. 29, 1962, "Why U.S. Didn't get TV on the Moonbeam [RA-3]"	"
938	JPL News Clips, <u>LA TIMES</u> , Feb. 8, 1962, "Three Causes Found in Ranger's Failure. [RA-3]."	"
939	Ranger Photos.	"
940	Scientific Instruments, Rangers 10 thru 14 <del>fix</del> [July 30, 1962]	
941	<del>PIO News Release, Feb. 4, 1965 PROJECT: RANGERS C &amp; D</del>	
942	<i>Minutes of Ranger Experiment Meeting</i> <u>The Exploration of the Moon</u> , Text by ARTHUR C. Clarke, Illustrations Library by R.A. Smith, Frederick Muller Ltd., London, 1954	
943	<u>The Exploration of Space</u> , Arthur C. Clarke, Harper & Bros. N.Y., 1951 <i>Burke</i>	
944	<del>Ask Atoms, Rockets, and the Moon</del> , Dinsmore Alter, Ph.D, Sc.D. Director, Griffith Observatory, 1947, published by the Griffith Observatory	Files
945	Payload Functional Description, Vega V-6, prepared by Functional Design Group, Aug. 21, 1959	Heacock files
946	Payload Functional Description, Vega V-1, prepared by Functional Design Group. Sept. 9, 1959	" "
947	Payload Functional Description, Vega V-6, prepared by Functional Design Group, revised Sept. 16, 1959	" "
948	Functional Description for Typical Vega Scientific Instruments Prepared by SEction 27, Space Instruments, Oct. 1959, reorder 59-357	" "
949	<u>The Moon</u> , Dr. H. Percy Wilkins and Patrick Moore, Faber and Faber London, 1955	Library
950	<u>Conquest of the Moon</u> , BY Wernher von Braun, Fred L. Whipple and Willy Ley, edited by Cornelius Ryan, Viking Press, N.Y. 1953	"
(XX) 951	Comment Draft of Gemini History, Barton C. Hacker, 1969 , Chapter 2	Files

# BOOK LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
952	Philco Corp., Aeronutronic Division, Publication No. U-2350 Bimonthly Technical Progress Report No. 6, Lunar Facsimile Capsule <del>Rear</del> Program, under JPL Contract 950462, rptg. period <del>Aug 1962 to</del> <del>25 Oct</del> 31 Aug. 1963 to 25 Oct. 1963	Burke's fil
953	<u>Sentinel</u> , Space Technology Laboratories, Feature Section on Able Program, n.d.	Files
954A <sup>v2</sup>	Agena Survey, Final Report of the Survey Team, 15 Feb. 1960, NASA doc.	<del>File</del> Files
955	IOM dated Sept. 6, 1961 from R.J. Parks/C.I. Cummings to All Concerned Subject: Agena Flight Schedule for JPL Missions in 1962.	CDC
956	Letter to Distribution from J.B. Medaris, dated Oct. 14, 1958, trans- mitting USAOMC document "Army Support to NASA," (Rebuttal by the ARMY regarding Transfer to NASA, put together by Gen. Medaris.) Letter also changes portions of document from Secret to Confidential.	"
957	JPL Technical Memo No. 33-52, Addendum B, <u>Some Interrelationships and Long Range Implications of the C-3 Lunar Rendezvous and Solid Nova Vehicle Concepts</u> , dated Oct. 2, 1961.	"
958	JPL Document, <u>Planetary Program Briefing Summary July 8, 1960,</u> REVISED July 14, 1960.	"
959	NASA document from George C. Marshall Space Flight Center, entitled MSFC/JPL Lunar Exploration Coordination Meeting, 12-13 Dec. 1960,	"
960	RCA Document under JPL Contract 950137, <sup>Vol. Summary</sup> <u>Ranger TV Subsystem</u> (Block III) <u>Final Report</u> , July 22, 1965.	Bookshelf
961	First Six Years of NASA, A Concise Chronology, NASA Historical Report October 1958 through September 23, 1964	Files
962	IOM <sup>11-11-5</sup> <del>Letter</del> dated Feb. 14, 1963 to Senior Staff from W.H. Pickering, Subject: Executive Council, enclosing Role and Composition of the Executive Council.	"
963	NASA-JPL RELATIONSHIPS, dated Aug. 2, 1960 signed by L.A. Du Bridge and T. K. Glennan	"
964	Principles Governing the Management and Operation of the Jet Propulsion Laboratory [Feb. 15, 1963]	"
965	Objectives of the Jet Propulsion Laboratory, Feb. 15, 1963, by Dr. Pickering	

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
966a	IOM No. 164, dated Feb. 6, 1963, from W.H. Pickering to SENior Staff, Subject: Special Meeting of the Senior Staff.	Files
966b	Agenda for Senior Staff Meeting on Feb. 16, 1963 at La Canada Country Club	"
966c	Notes taken at Senior Staff meeting, from Jim Burkes files	"
967	Section Report No. 29-1, dated Feb. 1, 1960 entitled, "Spacecraft Design Criteria and Considerations; General Concepts, Spacecraft S-1," by Dan Schneiderman.	"
968a-d	Official NASA Flight Schedules from Dec. 20, 1962 to June 11, 1964 1965	"
969	<u>The Moon</u> , and the Condition and Configurations of its Surface, by Edmund Neilson, London, Longmans, Green, and Co. 1876	Library
970	Do We Have A Space Program? by Dr. Pickering, <u>Astronautics</u> , Jan. 1960	Files
971	Pioneer: An Achievement, by Frank <del>Ex</del> Pollard, <u>Journal of Space Flight</u> , March 1959.	"
972	On the Origin of the Lunar Surface Features, by Gerard P. Kuiper, from <del>Nat'l Acad. Sci. Proc.</del> <u>Nat'l Acad. Sci. Proc.</u> 1954	"
973	The Lunar Surface, by T. Gold, from <u>Monthly Notices of the Royal Astronomical Society</u> , 1955	"
974	Earth and <del>the</del> Moon: Past and Future, by Gordon J.F. MacDonald, from <u>Science</u> , August 28, 1964	"
975a	The Origin of the Moon's Surface Features--I, by Harold C. Urey, from <u>Sky and Telescope</u> , January 1956	"
975b	<del>IX</del> IX The Origin of the Moon's Surface Features--II, by Harold C. Urey, from <u>Sky and Telescope</u> , Jan. 1956	"
976	Moon's Organisms, Preventing Contamination Poses Problems in Lunar Landings, <del>from the Times</del> <u>New York Times</u> , May 1, 1960	"
977	Holaday Quitting Space Liaison Job, <u>New York Times</u> , April 15, 1960	"
978	The Origin and Nature of the Moon, by Harold C. Urey printed in the <u>Annual Report of the Board of Regents of the Smithsonian Institution</u> , 1960	"
979	Interplanetary Bases--The Moon and the Orbital Space Station, by Francis R. Fears " from <u>Journal of Space Flight</u> , Sept. 1951	"
980	Trip to the Moon, from <u>Aviation Week</u> , Aug. 30, 1954	"
981	Wide Pease Use Seen for Earth Satellite, <u>Aviation Week</u> , App. 27, 1953	"

## SOURCE LIST #2

## RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
982	<u>Lunar Instrument Carrier--Landing Factors</u> , by H.A. Lang, RM-1725 dated June 4, 1956, The Rand Corporation	Library
983	Agenda, Convair - Astronautics - JPL meeting at Convair, VEGA PROGRAM Review Coordination Meeting No. 3, Sept. 24, 1959, from <u>Vega B Documents</u>	John Porter
984	Vega Management Document No. 6, April 7, 1959, from Dr. Pickering to Distribution	File
985	IOM dated 11-20-59 to "All Concerned" from J.D. Burke, re Sterilization	"
986x	NASA Release NO. 59-270 dated Dec. 8, 1959, Ostrander Named to Head New NASA Headquarters Unit.	"
987	IOM dated 12/29/59 to "All Concerned" from John Small, Subject: System Design Section Operations.	"
988	NASA Release No. 59-285, dated Jan. 1, 1960, NASA Renames Headquarters Units.	"
989	Memorandum of Agreement on Launch Pad Facilities for NASA Agena Firings, signed by M. Rosen, Chief of Rocket Vehicle Development, to the NASA Administrator and the Commander ARDC, <del>dated</del> dated Jan. 10, 1960.	"
990	IOM dated 1-12-60 to J.D. Burke from A.R.M. Noton, subject: JPL Radio-Command Midcourse Guidance.	"
991	IOM to J.D. Burke from V.C. Clarke dated 1/14/60, Subject: AMR vs PMR Payload for Agena	"
992	IOM dated Jan. 21, 1960 to Cole, Giberson, Rechton, Hibbs and Schurmeire from C.I. Cummings, Subject: S-1 scheduled.	"
993	IOM dated Jan. 21, 1960 to Division Chiefs, from C.I. Cummings, Subject: Basic Assumptions for Manpower and Funding Plans	"
994	IOM dated 3/8/60 to "All Concerned" from J.D. Burke, Subject: Sterilization	"
995	IOM <del>dated</del> dated 4-7-60 to Distribution from J. Brayshaw, Subject: Measurement and Control Instrumentation for Hot Test Vehicle.	"
996	Document dated April 13, 1960 by C.F. Mohl with title, [JPL] Sterilization Panel Meeting.	"
997	IOM dated 4/26/60 to C.F. Mohl from G.L. Hobby, subject: Sterilization Procedure.	"
998	IOM dated 4/27/60 to M. Eimar from G.L. Hobby, subject: Spacecraft Sterilization.	"
999	IOM dated 5/26/60, to F.E. Goddard from C.I. Cummings, Subject: Vela Hotel	"
1000	Conference Report dated 5-25-60 from Jim Burke, Subject: Vela Hotel Status	"

## SOURCE LIST #2

Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1001	IOM dated April 7, 1959 from W.H. Pickering to Distribution, Subject: Vega Program Objectives and Schedule.	Files
1002	IOM dated April 14, 1959 from J.H. Keyser to Distribution, Subject: Vega Program; Preliminary Design Phase Assignments & Schedule	"
1003	Memorandum from the Administrator [NASA] dated May 1, 1959, Subject: Functions and Authority - NASA Atlantic Missile Range Operations Office (AMROO), signed by T. K. Glennan	"
1004	IOM dated 7/8/59 from D. Schneiderman to Distribution, Subject: Tentative Allocation of Space in Vega Space Payload, with sketch.	"
1005a	IOM dated 7/13/59 <del>xxxxxxxx</del> to Distribution from W.H. Pickering, Subject: JPL Procedures for Technical Direction of Vega Program.	"
1005b	Attachment to abovedentitled, " Procedures for the Technical Direction of NASA-Convair Astronautics Contract No. NASW-45."	"
1006	IOM dated 10-28-59 to Distribution from D.F. Shherff/F.C. Smith, Subject: Delivery of Spacecraft Components for <del>VI VI</del>	"
1007	IOM dated July 25, 1959 from W.H. Pickering to Distribution, Subject: Vega Payloads	"
1008	IOM dated Aug. 7, 1959, to Distribution from J.H. Keyser, Subject: Minutes of the Vega Staff Meeting of Aug. 3, 1959.	"
1009	IOM dated Aug. 11, 1959 to Distribution from J.H. Keyser, Subject: Minutes of the Vega Staff Meeting of Aug. 11, 1959.	"
1010	Document entitled BEAT THE RUSSIANS, dated Sept. 29, 1959	"
1011	IOM dated Sept. 30, 1959, to Distribution from J.H. Keyser, Subject: Minutes of the Vega Staff Meeting of Sept. 28 [1959]	"
1012	IOM dated Oct. 8, 1959, to Distribution from J.T. Ofer, Subject: Minutes of Vega Programming Meeting No. 5, Oct. 7, 1959.	"
1013	Document dated Nov. 10, 1959, entitled TEN YEAR PROGRAM, MISSIONS & VEHICLES	"
1014 <del>xxxx</del>	IOM dated Nov. 12, 1959, to Distribution from Ad Hoc Planning Committee " Subject: Lab Ten-Year Plan -- Revisions	"
1015	IOM dated Nov. 13, 1959, to Distribution from J.H. Keyser, Subject: <del>Minutes</del> Minutes of the Vega Staff Meeting Nov. 9, 1959.	"
1016	IOM dated Nov. 30, 1959, to Distribution from J.H. Keyser, Subject: Minutes of the Vega Staff Meeting Nov. 25, 1959.	"

## SOURCE LIST #2

## Ranger

<u>Max</u>	<u>No.</u>	<u>Title</u>	<u>Location</u>
	1017	Interoffice Memo No. 22, dated January 13, 1960, from Dr. Pickering to "All Concerned", subject: Spacecraft S-1 Development	"
<del>1018</del>	1018	IOM No. 24, dated January 26, 1960, from Dr. <del>Rike</del> Pickering to Senior Staff, et al, Subject: Program Director for Ranger [Cummings]	"
	1019	Conference Report No. 14-601, dated FEB. 2, 1960, Subject: Conference at LMSD, Feb. 2, 1960, Agena.	"
	1020	IOM dated 2-12-60, to Distribution from D. Schneiderman/J. Small Subject: Assignment of Responsibility in Spacecraft Integration Group	"
	1021	IOM dated 2/2/60, to Division <del>xxxx</del> chiefs from C.I. Cummings, Subject: Ranger Scheduling.	"
	1022	IOM No. 31, dated Feb. 16, 1960, from W.H. Pickering to Senior Staff, et al, subject: Ranger Program Director's Office	"
	1023a	Lockheed Launch Vehicle Chronology from 15 Feb. 1960 to Mar. 30, 1961	"
	1023b	Document called, "Management Problems."	"
	1024	IOM dated 2/17/60 from C.I. Cummings, to All Division Chiefs, Subject: Ranger A Program Guidelines	"
<del>1025</del>	1025	IOM No. 33, dated Feb. 26, 1960, from Dr. Pickering to Senior Staff, et al <del>xx</del> Subject: Definition of Programs.	"
	1026	Telephone Report RPD-2, dated Feb. 29, 1960, by C.I. Cummings, participants, Hans Hueter, ABMA, Silverstein, NASA, Bill Fleming, NASA, and C.I. Cummings.	"
	1027	Letter dated March 7, 1960, from C.I. Cummings to Hans Hueter at ABMA, Subject: Agena-B Lunar Committee Technical Panels, JPL Participants	"
	1028	IOM from J.D. Burke to C.I. Cummings, dated 3/25/60, Subject: Ranger Flight Program Planning Alternatives.	"
	1029	Docuemnt entitled, "Flight Test Responsibilities and Organization for the Agena B Project at AMR," about the spring of 1960	"
	1030	Ranger Agena Project Organization at JPL [Organization Chart] 3/31/60	"
	1031	Trip Report No. RPD-7, dated 4/1/60 prepared by C.I. Cummings [Report of the second meeting of the Agena-B Coordination Board]	"
	1032	Notes NO. 15 of the Director's Staff Meeting of April 11, 1960	"
	1033	Trip Report No. 311-612, dated 5/19/60, at LMSD Sunnyvale, Calif. by Gordon Kautz, Subject: NASA Agena Program.	"
	1034	Trip Report RPD-10, dated 5/19/60, same trip as above by C.I. Cummings	"



## SOURCE LIST #2

## RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
1035	Letter dated May 25, 1960 from John F. Stone, Assoc, Dir. of Abma to Dear Sir: [Burke, I think]	Files
1036	IOM dated 5/27/60 to Distribution from C.F. Mohl, Subject: Minutes of JPL LMSD Meeting on Sterilization on May 24, 1960.	"
1037	IOM dated 6/3/60 to All Concerned from H. Jacobson/D. Scherff subject: Proof Test Model Test Teams	"
1038	IOM dated 6/4/60 to Distribution from J.D. Burke, Subject: Vela Hotel Experiment for RA-1 and RA-2	"
1039	IOM dated 6/10/60 to C.I. Cummings from J.F. Koukol, Subject: Comments on the Agena Tracking Panel Meeting at AMR, June 8, 1960.	"
1040	Letter <del>from</del> dated June 10, 1960 from Don Ostrander, NASA, to Wernher von Braun of Marshall Space Flight Center, giving clarification of MSFC responsibilities.	"
1041	IOM dated June 15, 1960 to Div. Chiefs, et al, from H.M. Schurmeier Subject: Spacecraft Design Specification Books	"
1042	IOM dated 6/20/60 to J. Gerpheide from H. Cotrill, Subject: LMSD Design Status - Ranger	"
1043a	Letter dated June 20, 1960 from Sandia Corp. to Mr. Don Sale of <sup>US Atomic Energy Commission</sup> Sandia Corp. transmitting copies of a revised report detailing the proposed LASL-Sandia participation on Ranger Flights A-1 and A-2.	"
1043b	"A LASL-Sandia Proposed Vela Hotel Experiment for the Ranger A-1 and A-2 Probes," June 17, 196-	"
1044	TXW dated July 1, <del>19</del> 1960, from Oran Nicks of NASA to Cliff Cummings, submitting approval for incorporating Vela Hotel Experiment.	"
1045	IOM dated 7/5/60 to Dr. Pickering from Cliff Cummings, Subject: Recommendations as Subjects for Space Exploration Council Meeting.	"
1046	V.K. Zworykin and C.A. Morton, <u>Television: The Electronics of Image Library Transmission in Color and Monochrome</u> , 2nd Edition, John Wx Wiley & Sons, Inc. New York, 1954. [Hel Smokler]	
1047	<del>The Politics of American Science, 1939 to the Present, edited by James L. Penick Jr., Carroll W. Pursell, Jr, Morgan B. Sherwood, and Donald C. Swain, Rand McNally &amp; Co., Chicago, 1965</del>	Library

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1048	IOM dated July 14, 1960 from V.C. Clarke to J.D. Burke, Subject: Files RA-3, 4, 5 Performance	
1049	Notes No. 27 of Director's Staff Meeting, dated July 25, 1960	"
1050	Memo dated Aug. 60 to McGarrity from Burke, Subject: Agenda Item for Center Directors' Meeting.	"
1051	<i>Off of Space Science &amp; Applications</i> (OSSA) Council Meetings [various dates in 1963] <i>fx Pendaflex Files</i> " <i>1964-1965 (from Pickering's files)</i> [various dates in 1962]	
1052	Letter dated 23 January 1969 #L-1453 from Gerhard F. Schilling of the RAND Corp., commenting on the Ranger Chronology.	"
1053	Letter dated Dec. 27, 1968 from Milton W. Rosen of NASA commenting on the Ranger Chronology.	"
1054	Letter dated 2 Jan. 1969 from T. Keith Glennan, of The Urban Coalition commenting on the Ranger Chronology.	"
1055	Letter dated Dec. 26, 1968 from A.F. Siefert commenting on Ranger Chron.	"
1056	Letter dated Jan. 10, 1969 from Gerald M. Truszynski commenting on Ranger Chronology.	"
1057	Letter dated Nov. 22, 1960 from Dr. Pickering to von Braun, in which Dr. Pickering <del>reviews</del> brings to MSFCs attention certain aspects of the Agena program.	"
1058a	"Comments on Ranger ISM Proposal as reviewed by the Agena B Coordination Board 30, Nov. <del>1960</del> , 1960, [Document dated 12-9-60]	"
1058b	Document entitled "Instrument Support Manager Concept," dated 11/30/60	" <i>Sup. of 1062</i>
1059	IOM dated Dec. 13, 1960 from L.M. Bronstein to M.R. Mesnard, Subject: RA-3,4,5 Capsule Evaluation.	"
1060	IOM dated Dec. 14, 1960 to All Concerned from C.G. Pfeiffer, Subject: Ranger Guidance and Trajectory Subcontract to STL.	"
1061	TWX dated Dec. 20, 1960 from Gilbert W. Ousley, GSFC Vehicle Integration Panel Member, to <del>Frederick</del> Duerr, Chairman, Vehicle Intergration Panel, at Marshall Space Flight Center.	"
1062	Document dated Dec. 20, 1960, entitled: Instrument Support Management Center Concept." <i>Orig of 1058b</i>	"
1063	"Report to JPL Management on Ranger-Agena Interface," dated Dec. 20, 1960 prepared by J.Q. Spaulding and F.A. Goodwin	"
1064	NASA Memorandum dated Dec. 23, 1960 to Program Directors, NASA Headquarters Directors, Field Centers From T.K. Glennan, Subject: Decontamination and sterilization procedures for lunar and planetary space vehicles.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
1065	<u>General Report on the Lunar Instrument Carrier, R.W. Buchheim</u> RM-1720, May 28, 1956, The Rang Corporation	CDC
1066	Pages from Air Force Document MTP-MS-IS-61-4, Dec. <del>26</del> 1962	Files
1067a	Some of the Preliminary Considerations on Extra-terrestrial Life Presented at an Informal Meeting on Dec. 4, 1958.	"
1067b	Informal Meeting on the Problem of <del>Electing</del> Extra-terrestrial Life Tentative Agenda dated Dec. 19, 1958, MIT	"
1067c	Discussions at the Meeting on the Problem of Detection of Extra- Terrestrial Life held at MIT, Dec. 19 and 20, 1958.	"
<del>1067d</del> 1068	P.J. Parker, "The Ranger Programme," <u>Spaceflight</u> Vol. 11 #1 (1/68)	"
1069	IOM dated 8-19-60 from J.H. Gerpheide, to C.I. Cummings, Subject: Sterilization Program.	"
1070a	Letter from Jim Burke dated Aug. 11, 1960, to E.M. Cortright enclosing the Study of Alternate RA-2 trajectory.	"
1070b	Study of Alternate RA-2 trajectory, July 26, 1960.	"
1071	IOM dated 8/18/60 from C.I. Cummings to Distribution, Subject: Action Items resulting from Meeting of Aug. 17. 19	"
1072	IOM dated Aug. <del>24</del> , 1960 from Wilkie Talbert <del>from</del> to Bill Shipley Subject: Agena Program Requirements Document.	"
1073	IOM dated Aug. 29, 1960, to Dist. from Schurmeier, subject: Minutes of Ranger Program Design Review Meeting on RA-3 held Aug. 24, 1960.	"
1074	IOM dated 8/30/60 to All Div. Chiefs from C.I. Cummings, commenting on loss of talented personnel from Lunar Program.	"
1075	Document dated 8 Sept. 60 from Gen. Powell of USAF to Maj. Gen. Don R. Ostrander, regarding NASA Agena B Program.	"
1076	Division 32 Program Structure, Sept. 1960	"
1077	IOM dated 9/6/60 from Mesnard/Cushing to RA-3 Dist., subject: Sequence of Events for RA-3 Terminal Maneuver	"
1078	Letter dated Sept. 9, 1960 from Jim Burke to Cortright, commenting on A LASL-Sandia Proposed Vela Hotel Experiment for RA-3,4,5.	"
1079	Letter dated Sept. 14, 1960 from R.F. Taschek of Los Alamos, to Cortright stating the inadvisability of including the Vela Hotel aboard Ranger.	"

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## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1080	IOM dated 10-10-60 from A.E. Wolfe <sup>to</sup> J.D. Burke, Subject: Space Simulation Chamber Tests.	Files
1081a	NASA Memo dated Oct. 24, 1960, from Asst Admin. Seamans to Directors of Program Offices, et.al. Subject: NASA Reliability Assessment Program. Encloses GMI 4-2-1.	"
1081b	GMI 4-2-1, Reliability Policy as applied to NASA Programs	"
1082	TWX dated Nov. 1, 1960 from Don Bourquin to American Bosch ARma Division, subject: JPL Contract N-30001, CC&S.	"
1083a	<del>Letter</del> IOM to Dist. from Pickering dated Oct. 24, 1960 enclosing "Staff Paper on Project Management," dated Oct. 14, 1960.	"
1083b	<i>Cover memo dated 10/14/60 from Glenn enclosing Staff Paper</i>	
1084	IOM dated Nov. 4, 1960 from J.D. McKenney to Pickering, Subject: NASA Reliability Assessment Program.	"
1085	IOM dated 11/4/60 from Cummings to Pickering, Subject: NASA Reliability Assessment Program.	"
1086	Document dated Nov. 10, 1960, signed by Col. of USAF Heerrington, Jr. of Air Force Ballistic Missile Div. (ARDC) to Mr. Hans Hueter of Marshall Space Flight Center, Subject: NASA Agena B. Program.	"
1087	IOM dated Nov. 10, 1960 from Cummings to Senior Staff, et. al., Subject: Appointment of Ranger Assistant Project Manager.	"
1088a+b	Letter dated Nov. 18, 1960 enclosing a copy of the Agena. Management Agreement [dated Nov. 17] to Dr. Dubus, Director of NASA Launch Operations Directorate, MSFC from S. Snyder Hq.	"
1089	Document dated 12/23/60 entitled Current Status, JPL-MSFC-LMSD [Launch stand problems as of 12/23/60]	"
1090	IOM dated 12/28/60 from G. Cushing to Distribution, Subject: Omni Antenna Configuration RA-3-4-5	"
1091	IOM dated 12/30/60 from M.R. Mesnard to Ranger 3 Dist., Subject: RA-3,4-5 Design Freeze	"
1092	Cost estimates for Rangers dated <del>7/13/62</del> 7/13/62	"
1093	"Lunar Exploration," Various articles taken from January 1969 issue of <u>Astronautics and Aeronautics</u> .	"

## Source List #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
	April 19, 1960	
1094 a	JPL Spec. RA12-2-110, Mission Objectives and Design Criteria	Files
1094b	JPL Spec. RA12-2-110A, 1 Nov. 1960, Mission Objectives and Design Criteria	"
1095a	JPL Spec RA345-2-110, 19 Apr. 1960, Mission Objectives and Design Criteria.	"
1095b	JPL Spec. RA345-2-110A, 10 June 1960, Mission Objectives and Design Criteria.	"
1095c	JPL Spec. RA345-2-110B, 6 Sept. 1960, Mission Objectives and Design Criteria	"
1095d	JPL Spec. RA345-2-110C, 19 Dec. 1960, Mission Objectives and Design Criteria, Ranger Spacecraft	"
<del>2a</del> 10958	JPL Spec RA345-2-110D, <del>19 Dec</del> 8 Aug. 1962, <del>Mission</del> Functional Specification Ranger RA-3, RA-4 and RA-5 Spacecraft Mission Objectives and Design Criteria	"
1096	IOM dated 1/6/61 to Distribution from M.R. Mesnard, Subject RA-345 Omni-Antenna Location	"
1097	Letter dated 4 Jan. 1961 from Lockheed Aircraft to Don Bourquin, JPL Contract Administrator, Subject: Contract No. 950020 under NASA Contract NASw-6, Sterilization of Agena Shroud, Weekly Activity Report and Program Status, 30 Dec. 1960.	"
<del>1097x</del> 1098	Conference Report No. LPD-3, dated 1/9/61 by C.I. Cummings, concerning conference between Cummings and Sam Snyder of Hq.	"
1099	IOM dated 1/12/61 to Dist. from Mesnard, Subject: RA-345 Omni Antenna	"
<del>1100</del> 2000	IOM dated Jan. 24, 1961 to V.C. Clarke from M.S. Johnson, Subject: <u>Feasibility of RA-2 Lunar Flyby</u>	"
<del>1101</del> 2001	IOM dated Jan. 26, 1961 from H.M. Schurmeier to E. Rechtin, Subject: Command Capability at Overseas DSIF Stations	"
<del>1102</del> 2002	NASA Agena B Launch Vehicle Program Management Organization and Procedures document dated 14 Feb. 1961	"
<del>1103</del> 2003	<del>Dis. 32 Program Organization</del> <del>Letter dated Feb. 16, 1961 from Headquarters signed by Abe Silverstein, to Dr. Pickering regarding GMI 4-1-1</del>	"
<del>1104</del> 2004	Feb. IOM dated <del>Jan.</del> 23, 1961 to J.D. Burke from V.C. Clarke, Subject: RA-2 Lunar Flyby Mission	"
<del>1105</del> 2005	IOM dated 3/7/61 to Attendees, plus Rechtin and Bronstein and <del>Hart</del> Hart, from Burke/Kautz, Subject: Ranger PROJECT DEVELOPMENT PLAN (PDP)	"

same  
as 2-346

## Source List #2

## RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
1106	Trip Report dated March 21, 1961 for Conference in Wash. D.C. held 3/6/61 prepared by C.I. Cummings	"
1107	IOM dated March 13, 1961 to J.H. Gerpheide from G.E. Sweeney Subject: Ranger 3,4,5 Battery Temperature	"
1108	IOM dated March 17, 1961 to H.M. Schurmeier from C.I. Cummings regarding antenna for Ranger at South Africa	"
1109	IOM dated March 22, 1961 to Jim Burke from H.M. Schurmeier, Subject: Cost of Command Encoder for South Africa DSIF Station.	"
1110	Letter dated April 3, 1961 from Donal B. Duncan of Aeronutronic to the Director of JPL, submitting their proposal for a design study for a lunar orbiting vehicle, using basic Ranger spacecraft.	"
1111a	IOM dated 4/10/61 to J.D. Burke from A.R. Hibbs, Subject: Ranger 3,4,5 Radar Data	"
1111b	IOM dated 3/27/61 to Dist. from W.E. Brown, Jr, Subject: Ranger 3,4,5 Radar Data	"
1111c	IOM dated 4/18/61 to J.D. Burke from Schneiderman/Mesnard, Subject: Ranger 345 Radio Altimeter Data	"
1112	IOM to Senior Staff from Dr. Pickering, dated April 25, 1961 Subject: Study on Accelerating the National Space Program	"
1113	IOM to J.D. Burke dated 4/28/61 from M.R. Mesnard, subject: Method of Commutating Radio Altimeter Reflectivity Data for Telemetry on RA-345.	"
1114	IOM dated April 28, 1961 to Dist. from J.D. Burke, Subject: Ranger Project Review Meeting for May 3, 1961	"
1115	IOM #63, dated May 9, 1961 to Senior staff, et al, from B. Sparks Subject: Spacecraft Sterilization Activities.	"
1116a	Letter dated May 10, 1961 from Dr. Hibbs to Dr. Charles Sonett of NASA, asking for additional funding for Contract NASw-81	"
1116b	Letter dated May 10, 1961 from Dr. Hibbs to Dr. Chas. Sonett of NASA, asking for additional funding for Contract NASw-82.	"
1117	IOM dated May 10, 1961 from <del>xxxx</del> Schurmeier to Senior Staff, et al, Subject: Laboratory Sterilization Program.	"
1118	IOM dated 5/24/61 to Dist. from Hastrup, Subject: Ranger Sterilization Program	"
1119	Letter dated May 25, 61, from C.I. Cummings to Dr. R.C. Seamans, Jr. Subject: <del>Rxxxx</del> Procedures for Sterilization of Ranger A3 Spacecraft.	"

## Source List #2

<u>No.</u>	<u>RANGER</u> <u>Title</u>	<u>Location</u>
1120	JPL Spec. RA345-4-120, 18 Aug. 1960, Functional Spec. Weight & Power Allocation, RA3, 4, 5.	Files
1121	JPL Spec. RA345-4-120A, 28 Sept. 1960, Functional Spec. Design Parameters (Weight, Power, Temperature, etc.)	"
1122	JPL Spec. RA345-4-120B, 1 Dec. 1960, Functional Spec. Design Parameters (Weight, Power, Temperature, Etc.)	"
1123	JPL Spec. RA345-4-120C, 20 May 1961, Functional Spec. Design Parameters (Weight, Power, Temperature, etc.)	"
1124	JPL Spec. RL-2-110, 8 Nov. 1961, Mission Objectives and Design Criteria, Ranger P-53 through P-56 Spacecraft (RA-6 through RA-9)	"
1125	JPL Spec. <del>Rax</del> R3-2-110, 1 April 1963, Functional Spec. Ranger Block III Spacecraft, Mission Objectives and Design <del>xxxx</del> Criteria	"
1126]	JPL Spec. FR3-2-110, 21 June 1963, Functional Spec. Ranger Block III, Mission Objectives and Design Criteria.	"
<del>KK</del> 1127	NASA, Report to the Committee on Science and Astronautics, House of Representatives, Review of the Canceled Atlas-Vega Launch Vehicle Development Dec. 1958 - Dec. 1959. by The Comptroller General of the U.S. April 1960	CDC 11195
1128	Trip Report, dated 6/6/61, at MSFC, Subject: Agena B Management Meeting, J.D. Burke	File
1129	Letter dated June 14, 1961, from Abe Silverstein of NASA to Dr. Pickering, submitting guidelines for 4 add. Ranger flights.	"
<del>1130x</del>	<del>Letter dated</del> [Start of Block III]	
1130	IOM dated June 14, 1961 from A.E. Dickenson to M.S. Johnson subject: Operational Procedures of the S/C Data Analysis Team during the RA-1 mission.	"
1131	NASA-Agena-B Management Meeting #2, MSFC, June 6, 1961, F.Duerr, Agena-B Systems Manager	"
1132	IOM dated June 22, 1961, from C.I. Cummings to J.D. Burke, Subject: Guidelines for Ranger Follow-On Preliminary PDP	"
1133	IOM dated July 10, 1961 from R.C. Hastrup/Program Eng. Section to Distribution, Subject: Procedures for Sterile Assembly of RA3 in SAF	
1134	Letter dated Jul.14, 1961, from J.G.Albert, Major USAF to J.D. Burke, confirming access to the JPL S/C Control Center at Hanger AE for Lt. B.F. Johnson of SSD of the Air Force.	

## SOURCE LIST #2

## Ranger

<u>No</u>	<u>Title</u>	<u>Location</u>
1135	IOM dated 7/25/61 from G. Cushing to H. Lawrence, Subject: HRF-Lunar Capsule Mod 3 (Contract N-21453) JPL @ ADF 7/19/61 Conference Notes re Conduct of A.D.	Files
1136	<del>XXXXXXXXXX</del> Letter dated 8/10/61, from Robert E. Rodney, Contracting Officer's Rep. of NASA WO to Frank H. McKibbin of JPL, Subject: RCA Contract No. 950137.	"
1137	IOM dated 8/10/61 from G.E. Nichols Jr to J.D. Burke, subject: Ranger Follow-on.	"
1138	IOM dated 8/11/61 from J.D. Burke to All Concerned, Subject: <u>Ranger Follow-on</u>	"
1139	Memo for Director, Office of Space Flight Programs dated 8/11/61 From Robert C. Seamans Jr., Subject: Approval of Preliminary Project Development Plan for Ranger Follow-On Flights	"
1140	IOM dated Aug. 31, 1961 from E. Rechtin, to R.J. Parks and Others Subject: S-Band and Ranging Development in the Ranger Follow-on and Mariner Programs.	"
1141	IOM dated Sept. 6, 1961 from R/J. Parks/ C.I. Cummings, Subject: Agena Flight Schedule for JPL Missions in 1962.	"
1142	IOM dated Sept. 6, 1961 from J. D. Burke to Dr. E. Rechtin, Sub: S-Band and Ranging Development in the Ranger Follow-on and Mariner Programs from E. Rechtin to J. Parks and others.	"
1143	IOM dated 9/11/61 from J.W. McGarrity to Brian Sparks re a call from Hq. enquiring Dr. Pickering's views on whether the technical administration direction for Agena should be located at JPL.	"
1144	TWX dated 9/12/61 to D.L. Forsyth of NASA from Brian Sparks answering the above telephone call.	"
1145 n	IOM dated 9/19/61 from C.I. Cummings to H.M. Schurmeier, in which Cummings asks Schurmeier's office to handle several things.	"
1146	TWX dated 9/25/61 from WHP To Seamans'	"
1147	Letter dated 9/29/61 from Oran Nicks of NASA to C.I. Cummings raising five questions of significance regarding Ranger.	"
1148	Technical Memorandum No. 33-32, <u>Lunar Program, Operational Policy Organization and Functions</u> , C.I. Cummings, Nov. 1, 1960	"



# Source List #2

<u>No.</u>	<u>RANGER</u> <u>Title</u>	<u>Location</u>
1149	Document, dated 14 Sept. <del>1945</del> 1959, "Agreement Between the Dept. of Defense and the National Aeronautics & Space Admin., Concerning Principles Governing Reimbursement of Costs."	Files
1150	Letter dated 11 May 1960, from Hans Hueter, Agena Centaur Project Director to Major John G. Albert, AFBMD, discussing problems with the 8096 engine.	"
1151	Letter, dated Oct. 14, 1960, from C.I. Cummings to William Fleming Chairman of Agena-B Coordination Board, NASA requesting RA-5 launches be advanced to June 20, 1962.	"
1152	Letter dated Oct. 19, 1960 from A.J. Kelley, Agena Vehicle Program Manager of NASA, to Major <del>xx</del> Albert of AFBMD requesting information regarding what emphasis is being put on the NASA program by LMSD.	"
1153	Enclosure to letter from Dr. von Braun (12/28/60) to Mr. Herschel J. Brown, of Lockheed.	File
1154	Letter dated Dec. 27, 1960, from Dr. Pickering to Dr. von Braun stating his appreciation for the increase support on Agena B.	"
1155	IOM dated 4/25/61 [No. 94] from Dr. Pickering to Senior Staff, Subject: Study on Accelerating the National Space Program.	"
1156	IOM dated June 28, 1961 from Ray Heacock to C.I. Cummings, Subject: Ranger Follow-on TV system	"
1157	IOM dated July 5, 1961 from C.I. Cummings to J.D. Burke, Subject: Ranger Follow-On.	"
1158a	Letter dated 7/13/61 from Ben Milwitzky to C.I. Cummings, enclosing letter from Brown to SEamans in which DOD agrees to supply tracking ships to cover Agena second burn on the Ranger flights.	"
1158b	Letter dated July 10, 1961 from Brown to SEamans, as above.	"
1159	TWX dated Aug. 9, 1961, from Dr. Pickering to Dr. Abe Silverstein, NASA, Summary of Difficulties encountered with spacecraft, launch vehicle and supporting equipment at the cape.	"
1160	IOM dated 17 Aug. 1961 from T.W. Candee to C.I. Cummings, Subject: Letter Contract 950137, Ranger Follow-On TV Mission	"
1161	IOM from C.I. Cummings to T.W. Candee, same subject as above, and in response to memo of above.	"
1162	TWX dated 9/25/61, [lengthy] from Dr. Pickering to Dr. Robert Seamans examining the implications of a possible assignment of this task to JPL.	"
1163	IOM dated Oct. 30, 1961 from Marshall S. <del>Shinnex</del> Johnson to Wolfe, Subject: On the Launching of Ranger 3	"

## Source List #2

## RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
<del>XXXX</del> 1164	TWX dated November 6, 1961 from Rob't SEamans to Dr. Pickering stating that decision has been made to retain management for Agena B at Marshall.	Files
1165	JPL Spec. RL-2-110, 8 Nov. 1961, Mission Objectives and Design Criteria, Ranger P-53 through P-56 Spacecraft (RA-6 through RA-9)	"
1166	Information from Contract JPL-M-48068, RCA Astro Elect. Div. taken from Contract Closeout Records.	"
1167	TWX dated Nov. 8, 1962, from Oran Nicks, NASA, to R. Rodney NASA WOO at JPL, also Burke, Sparks, Larsen, giving authorization <del>Initiation</del> to initiate Aeronutronic Facsimile Capsule Development.	"
1168	Memo from NASA AMROO to Deputy Commander/Tests and Deputy Commander/" Range, regarding Vega facilities (Hangar F)	"
<del>Range</del> 1169	TWX dated Dec. 11, 1959 to Convair Astronautics from R.E. Cushman NASA Contracting Officer, terminating work under Contract NASW-45 excepting the precision auto-pibt.	"
1170	TWX dated Dec. 11, 1959 to General Electric from R.E. <del>Ex</del> Cushman NASA Contracting Officer, terminating work on contract NASW-30, excepting work necessary for the completion of preliminary flight rating tests now in progress.	"
1171 <del>Ex</del>	<del>Ex</del> TWX dated Dec. 11, 1959, to Commander of AFBMD from R.E. Cushman, NASA Contracting Officer, terminating work on modification of Atlas Boosters for Vega Application.	"
1172	Letter Notice of Termination dated Jan. 14, 1960 to Convair, from <del>Ex</del> D.H. Murphey, Contracting Officer NASA	"
1173a	Letter dated Nov. 10, 1960 from NASA Hq. [Abe Silverstein] to Goddard Space Center, Dr. Goett, Subject: Launch vehicle capabilities and performance.	"
1173b	Enclosure to above a letter dated Nov. 1, 1960, same subject, from Gen. Ostrander, Maj. Gen. USAF, Director, Launch Vehicle Programs.	"
1174	TWX dated <del>June</del> <sup>July</sup> 20, 1962, from Oran Nicks, NASA, to Brian Sparks calling out guidelines to be used as a basis in planning the Program Obligation Plan.	"
1175	Memo from N.W. Cunningham, NASA, dated Aug. 16, 1962, to Director, Lunar and Planetary Programs, Subject: Trip Report of Aug. 7-8, JPL.	"
1176	TWX dated Aug. 23, 1962 from N.W. Cunningham, NASA to J.D. Burke, JPL, authorizing him to proceed with procurement of long leadtime items for RA-10.	"

## Source List #2

## RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
1177	Memo for Executive Ass't, Lunar & Planetary Programs dated 9/6/62 from N.W. Cunningham, Subject: Ranger PAD	Files
<del>1178</del>	Memo for Director, Lunar & Planetary Programs, dated 9/6/62, from N.W. Cunningham, Subject: Ranger Mission Plans Following RA-14.	2-689
1179	Memo to Director, Lunar & Planetary Programs, dated Oct. 2, 1962, from N.W. Cunningham, Subject: Rangers 10-14.	"
1180	TWX dated Oct. 3, 1962 from E.M. Cortright to R.E. Rodney, Western Operations Office, NASA, Santa Monica, authorization to release funds..	"
1181	TWX dated June 6, 1963 from Thomas Bugher, Acting Dir. Contract Mgmt Office of Procurement, NASA, to Paul Ross, JPL, Subject: Northrop Ranger Spacecraft Subcontract: Impact of Skybolt Termination.	"
1182	TWX dated Aug. 19, 1963, from Paul Ross, NASA-R at JPL to NASA Hq. Report for week of Aug. 11-17 regarding Ranger Quarterly review.	"
1183	Letter dated Feb. 19, 1963 from Robert E. Rodney, NASA-WOO Rep to NASA Hq. Oran W. Nickx, Subject: JPL Procurement Plans for Ranger Spacecraft System.	"
1184	TWX dated January 1964 from Paul E. Ross, Manager NASA-R to Robert W Kamm, Director NASA WOOxxxReport for the week of Jan. 12-18.	"
1185	IOM dated 11/15/61 from M.R. Mesnard to J.D. Burke, Subject: On the Intrinsic Values of Launching RA-3 on Schedule .	"
1186	NASA, Office of Space Flight Programs, FY1961 Operating Budget Plan, Research & Development [includes FY 1960 carryover]	"
1187	NASA, Fiscal Year 1962 Estimates, Lunar and Planetary Exploration	"
1188	NASA, Scientific Investigations in Space, Fiscal Year 1960 Estimates, dated 27 April 1959.	"
1189	NASA, FY 1961 Funding Estimates, SFD, Lunar Exploration, June 9, 1959	"
<del>118x</del> 1190	Memo dated 26 Aug. 1959 to Dr. Newall, from G.F. Schilling, Subject: Fiscal Year 1960 Budget Allocation, Reference: Items 1 and 2 of Mr. Stoller's memo of 13 Aug. 1959.	"
1191	NASA, Fiscal year 1961 Estimates, Lunar and Planetary Exploration, dated 11 Sept. 1959.	"
1192	NASA, Memo to Mr. Sandings [unclear] dated Oct. 5, 1959, signed by E. Cortright, Subject: FY 1960 Budget Plans for LUNar and Planetary Exploration.	"
1193	NASA T. G.F. Schilling from N.W. Cunningham, 3 Dec. 1959, Subject: FY 1960 R&D Budget--Lunar Science Program	"

## Source List #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1194	Estimated Breakdown-Fy1961 Lunar & Planetary Exploration, 22 Jan. 1960 G.P. Schilling	Files
1195	G.F. Schilling from N/W. Cunningham, 28 March 1960, Revised FY1960 R&D Budget--Lunar Science Program	"
1196	Office of Space Flight Programs, FY 1961 Budget, dated 5/24/60	"
1197 FY	E.M. Cortright from R.C. Moore [NASA] Lunar and Planetary Sciences FY60 funding status as of 22 July 1960, dated <del>24</del> 25 July 1960	"
1198a	Letter dated Sept. 7, 1960 from Abe Silverstein to Dr. Pickering, enclosing the Approved FY 1961 Financial Operating Plan for JPL	"
1198b	FY 1961 Financial Operating Plan for JPL	"
1200a	Letter dated Nov. 17, 1960 from Abe Silverstein to Dr. Pickering, answering Dr. Pickering's letter of Nov. 3, 1960 regarding <del>forecast</del> forecast of a shortage of Fiscal Year 1961 R&D money at JPL.	"
1200b	Letter dated Nov. 3, 1960 from Pickering to Silverstein.	"
1201	Letter dated Jan. 9, 1961 from NASA HQ to WOO, Subject: JPL FY 1961 Operating Plan [/FY 61 Budget]	"
1202	Ranger Project Development Plan, Supplement A, Sept. 23, 1961	CDC <del>the</del>
1203a	Letter dated Mar 14, 1961 from SEamans to NASA Hq Staff Field Center Directors, Subject: Launch Vehicle Cost Estimates	Files
1203b	Letter dated Mar. 14, 1961 from E.W. Hall to NASA Staff, Subject: Launch Vehicle Characteristics	"
1203c	Letter dated Mar. 14, 1961, from E.W. Hall to NASA Hq Staff Field Center Directors, Subject: Launch Vehicle Cost Data	"
1204	Conference Report No. 622-291, dated 1 May 1961 on Project Ranger, Subject: Aeronutronic Letter 18 Apr. 1961, Add. Costs required to complete Contract N-21453	"
1205	Memo for Director WOO, dated <del>2x</del> 28 April 1961 from Col. Chas. H. Rodman USAF, Subject: Reassignment of Funds	"
1206a	Memo for Chief of Sciences by N.W. Cunningham, June 20, <del>1961</del> 1961, Subject: Proposed <del>R&amp;D</del> FY 1962 Operation Budget Plan for Lunar Sciences Program.	"
1206b	Memo for Chief of Sciences by N.W. Cynningham, Oct. 13, 1961, Subject: FY 1962 Operation Budget Plan for Lunar Sciences Program.	"
1207	Memo for Chief, Lunar and R Planetary Sciences, June 28, 1961, Subject: Status of FY 1961 Budget for Lunar Sciences. [from Cunningham]	"
1208	IOM dated July 6, 1961 to Ted Candee from McKibbin & Bourquin, Subject: Special Report per request 27 June 1961.	"

## SOURCE LIST #2

Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1209	Memo to File 2647 from Charles A. Hemler, 20 July 1961, Subject: Preliminary Estimate of Cost, Ranger Follow-On High Resolution TV Camera Mission.	Files
1210	Memo to File 2647 from C.A. Hemler, 3 Aug. 1961, Subject: Ranger Follow-On, <del>High</del> High Resolution TV Camera Mission, Minutes of Meeting of 31 July 1961 and 1 Aug. 1961 between JPL and RCA AED A.R. D.H	"
1211	IOM from Al Hibbs dated 11/15/61 to Don Kindt, Nov. 15, 1961, Subject: Ranger [tv] follow-on Design Modifications	"
1212	IOM from M.R. Mesnard to Distribution, dated Nov. 22, 1961, Subject: Minutes of First Ranger 6-9 Design Review Meeting.	"
<del>1212a</del>		
1213	IOM from C.I. Cummings to J. <del>Sam</del> Small, dated 12/7/61, giving working guide-lines of proposed priority of lunar mission objectives.	"
1214	Letter from J.D. Burke to R.A. Teare and Dr. Spencer Spaulding of RCA-AED Subject: Ranger TV Subsystem, JPL Contract 950137, Assigned JPL Personnel. dated DEc. 18, 1961.	"
1215	<del>NASA Summary Minutes</del> <del>NASA document</del> dated Oct. 16, 1961 from Jack Posner, Acting Sec'y of Space Sciences Steering Committee <del>xxx</del>	"
1216	Lockheed Organization Chart, 1961-1962	"
1217	Document entitled, "Information Aspects of Ranger 3," dated 10/31/61	"
1218a	Memo from Vernon L. Dicks of PanAm to Program Management, MTVPB dated 16 Sept. 1959, Subject: Hanger H Modifications for Project Vega.	"
1218b	Memo from E.P. Wynne, Colonel USAF dated 1 Oct. <sup>1959</sup> to: MTLPR/ Capt. Skidmore Subject: Hanger H Modifications for VEGA.	"
1219	IOM dated Jan. 2, 1962 from R.L. Heacock to Dist., Subject: Ranger Follow-on Radiation Experiment.	"
<del>1219a</del> 1220	IOM dated Jan. 2, 1962 from M. Eimer to C.I. Cummings, Subject: Div. of the Space Sciences Support to the Ranger 6,7,8 and 9 Project.	"
1221a	Letter from A.R. Hibbs dated Jan. 4, 1962 to Gene Shoemaker enclosing memo entitled "Dissemination of Ranger 3 Photographs."	"
1221b	IOM dated Jan. 4, 1962 from A.R. Hibbs to Experimenters for the Ranger TV mission, Subject: Dissemination of Ranger 3 photographs.	"

# Source List No. 2

## RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
1222	Letter dated Jan. 5, 1962, from J.D. Burke to J.L. Sloop, NASA, setting down some thoughts on the Agena B Coordination Board.	"
1223	Senior Staff Notes No. 70, dated Jan. 6, 1962	"
1224	IOM dated 1/8/62 from M.R. Mesnard to G.F. Baker, Subject: Ranger Follow- <del>up</del> on, Scientific Power "On" During Countdown."	"
1225	IOM dated Jan. 18, 1962 from R.E. Pabst/W.S. McDonald to R.L. Heacock Subject: Ranger Follow-on Radiation Experiment Revision	"
1226	TWX dated Jan. 25, 1962 from W.H. Pickering to Sir Alfred Lovell, regarding tracking of Ranger III.	"
1227	Minutes of Second Meeting of California Universities Council on Space Sciences, Jan. 29, 1962 [Early NASA/University relationships]	"
1228	Letter dated Jan. 26, 1962 from E.L. Montgomery of ADF, to L.C. Pehl of JPL, Subject: Surface Data Measurement Capsule (SURMEC).	"
1229	IOM dated Feb. 2, 1962 from G.P. Kautz to Distribution, Subject: Ranger Follow-on, Space Science Experiments.	"
1230	Memo for Head, Lunar Sciences Program, dated 9 Feb. 1962, from C.R. <del>Spark</del> Sparger, Staff Scientist NASA, Subject: Revised FY 1962 Lunar Sciences Budget.	"
1231	IOM dated 2/15/62 from D.H. Kindt to R.L. Heacock, Subject: RCA TV Subsystem Design MOdification.	"
1232	IOM dated 2/27/62 from R.C. Hastrup to Distribution, Subject: The Inforporation of Formaldehyde-methanol LIquid Sterilization in the Ranger Sterilization Program.	"
1233	TWX dated Mar. 1, 1962 from N.W. Cunningham to J.D. Burke, regarding scientific instruments for Ranger Follow-on.	"
1234	Letter dated Mar. 6, 1962 from J.D. Burke to N.W. Cunningham, regarding the integration of TV experimenters into the project team, and proposals on the auxiliary radiation experiments.	"
1235	IOM dated Mar. 14, 1962 from J.D. Burke to C.I. Cummings, Subject: Ranger 6 - 9 Scientific Experiments.	"
1236	Letter from Glennan to Packer, June 17, 1960 re Agena slippage	"

## SOURCE LIST NO. 2

## RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
1237	IOM, March 20, 1962, G.P. Kautz to C.F. Campen, Subject: Ranger Follow-on RCA TV Subsystem.	Files
1238	IOM, Mar. 21, 1962 from C.W. Cole to C.I. Cummings/J.D. Burke, Subject: Science Experiments, Ranger Follow-on.	"
1239	IOM, 3/25/60 from J.D. Burke to C.I. Cummings, Subject: Ranger Flight Program Planning Alternatives[/Schedule Philosophy]	"
1240	Letter March 23, 1962 from Pickering to Cortright, discussing funding; namely, reducing Prospector.	"
1241	Letter April 2, 1962 from J.D. Burke to N.W. Cunningham, re Experiments for RA 6-9.	"
1242	IOM 7/5/60 from C.I. Cummings to Dr. Pickering, Subject: Recommendations as Subjects for Space Exploration Council Meeting	"
1243	IOM July 14, 1960 from V.C. Clarke to J.D. Burke, Subject: RA-3,4,5 Performance	"
1244	IOM April 18, 1962 from J.D. Burke to Pickering/Sparks, Subject: RA 6-9 Experiments	"
1245	IOM Apr. 19, 1962 from H.M. Eimer to G.P. Kautz, Subject: Ranger Follow-on <del>Experiment</del> Experimenter/JPL Relationships.	"
1246	Conference at RCA, Hightstown, N.J. dated April 16, <del>1962</del> 1962	"
1247	Letter dated April 20, 1962 from C.I. Cummings to N.W. Cunningham, re reprogramming exercise for FY 1962	"
1248	Trip Report dated Nov. 29, 30, 1960, by J.D. Burke at Monterey, Calif. Agena B Coordination Board Meeting.	"
1249	Technical Memorandum No. 33-174, Tracking and Data Acquisition for Ranger Missions 1-5, R.A. Renzetti, July 1, 1964.	Renzetti
1250	Tech. Memo No. 33-275, Tracking and Data Acquisition for Missions VI-IX N.A. Renzetti, Sept. 15, 1966.	"
1251	IOM Aug. 24, 1960 from C.I. Cummings to Distribution, Subject: NASA Program Management Plans [Includes Project Ranger (Agena) and Project Surveyor (Centaur)].	Files
1252a	IOM H.R. Lawrence to Dist, 5/11/62, Subj: RCA Orbiter Contract, enclosing Statement of Work	"
1252b	Statement of Work for above, entitled, "Lunar Capsule Orbiter Feasibility Study," Exhibit A to Letter Contract No. 950340 [5/11/62]	"

## Source List #2

### Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1253	Real Time Video Presentation at Goldstone for Ranger Follow-On, 17 May 1962	Files
1254	IOM dated June 8, 1962 from C. Campen to H. Lawrence, Subject: Objectives and Instrumentation for Ranger Lunar Orbiter Feasibility Studies	"
1255	IOM dated June 11, 1962 from H.J. Stewart to Gordon Kautz Subject: Ranger Follow-On Program Expectations	"
1256a	Document entitled "Statement of LOD Position Concerning Management of Launch Operations for NASA Agena-B Program at AMR," June 14, 1962	"
1256b	Attachment to above, entitled "NASA, Agena B Launch Vehicle Program, Management Organization and Procedures," dated 14 Feb. 1961	"
1257	IOM dated <del>6/15/62</del> 6/15/62, from J.G. Small to C.I. Cummings, Subject: Ranger Follow On <sup>2</sup>	"
1258	IOM dated 6/14/62 from M.R. Mesnard to M.S. Johnson/P. Rygh, Subject: Ranger Design Changes Affecting Flight Operations.	"
1259a	Letter dated June 21, 1962 from R.J. Krause of Bendix to C.I. Cummings	"
1259b	Ford, Aeronutronic Div. IOM dated May 15, 1962, Subject: Tentative RFP, Ranger Spacecraft	"
1260	Handwritten Memo from J.D. Burke dated 6-25-62, proposal for Contractor <sup>2</sup> to take, Follow-On <sup>2</sup>	"
1261a	LOD-AMR Meeting dated June 25, 1962	"
1261b	Statement of LOD Position Concerning Management of Launch Operations for NASA Agena-B Program at AMR, June 14, 1962.	"
1262	IOM dated June 22, 1962 from S. Rothman to Dist., Subject Status Report " <del>Ranger</del> Ranger Follow-On (7-9)	"
1263	IOM dated June 26, 1962 from A.E. Wolfe to J.D. Burke, Subject: RA 7-9 Experiment Status	"
1264	IOM dated July 9, 1962 from Burke to Dist., Subject: Ranger Flights Beyond RA-9, Planning and Personnel Assignments	"
1265	IOM dated 7/24/62, from D.H. Kindt, to Dist., Subject: Status of RCA TV Subsystem Contract 950137 for Second Quarter of 1962.	"
1266	Document entitled: [NAS] Proposed Sterilization Guidelines as Mod- ified by Working Sub-Group on Space Probe Sterilization, July 27, <del>1962</del> 1962	"
1267	IOM dated 7/31/62 from F.A. Goodwin to J.D. Burke, Subject: Mariner R Solar Panels on Ranger Missions	"



## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1268	IOM dated 2 Aug. 1962, from A.E. Wolfe to J.D. Burke, Subject: Recommendation on RA-7 - 14 Power	Files
1269	IOM dated Aug. 6, 1962 from S. Rothman to Distr., Subject: Ranger Follow On Status Report	"
1270	IOM dated 9 Aug. 1962 from A.E. Wolfe to R. Meghreblian/K. Coon, Subject: Relations with Future Experimenters	"
1271	IOM dated 9 Aug. 1962, from A.E. Wolfe to G.E. Sweetnam, Subject: IOM Sweetnam to Wolfe - 8/6/62	"
1272	Letter dated Aug. 10, 1962 from J. Burke to N.W. Cunningham, NASA Subject: Ranger 7 - 9 Bus Experiments	"
1273	TWX dated Aug. 13, 1962 from Pickering to Homer Newell, requesting sterilization waivers for items on Ranger S/C 6-9.	"
1274	Letter from Homer Newell of NASA to Dr. Pickering replying to TWX re sterilization, Aug 11 1962.	"
1275	TWX dated Aug. 23, 1962 from N.W. Cunningham to James D. Burke, giving go ahead to procure long leadtime flight items for RA-10.	"
1276	IOM dated Aug. 29, 1962 from <del>ExD</del> J.D. Burke/G.P. Kautz to Distribution, Subject: Ranger Follow-On RA 10-14 Subcontracting.	"
1277	IOM dated 8/30/62 from R.C. Hastrup to C.I. Cummings, Subject: Recommended Changes in Lunar Sterilization Policy	"
1278	IOM dated 13 July 1962 from Wolfe to Burke, Subject: Review of Power Deficiency for Ranger 8 and 9.	"
1279	IOM dated Aug. 30, 1962 from R.B. Harker to J.F. Koukol, Subject: Procurement Schedules for Ranger 10-14.	"
1280	TWX from Pickering to Newell, Aug. 31, 1962, re waivers on CC&S	"
1281	TWX from Cunningham to Cummings, granting <del>xxxx</del> waivers for above	"
1282	IOM dated Sept. 12, 1962 from B.T. Morris to J.D. Burke, Subject: RA-5 Launch Vehicle Reliability Issues.	"
1283	IOM dated Sept. 19, 1962 from Rygh to Distr., Subject: Mariner-Ranger Conflicting Requirements [DSIF]	"
1284	Summary of Experimenters Meeting on Ranger 5 held Sept. 25, 1962	"
1285	TWX dated Oct. 5, 1962 from N.W. Cunningham to J.D. Burke, go-ahead on negotiations with ADF for R&D and procurement of basic components for add. lunar capsules.	"

## SOURCE LIST #2

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No.	Title	Location
1286	H.J. Wheelock, <u>The Surface of the Moon</u> , A review of the Findings of the Unmanned Lunar Exploration Programs: 1959-1967, Sept. 6, 1967	File
1287	<u>2nd Bimonthly Technical Progress Report, Development of a Lunar Capsule Subsystem</u> , JPL Contract N-21453, Publication No. U-976, Reporting Period: 1 July to 31 Aug. 1960, Aeronutronic, A Div. of Ford Motor Co.	"
1288	Letter dated Nov. 2, 1960 from Robert E Pace Jr of Marshall Space Flight Center to James D Burke, urging JPL not to <del>accept</del> <sup>give</sup> technical direction <del>to</del> from LMSD except through proper channels.	"
1289	IOM <del>Letter</del> dated April 15, 1960 from B. Sparks to C.I. Cummings, Subject: Lunar Capsule Contract	"
1290	<u>Lunar Capsule Master <del>xxxx</del> Program Plan</u> , Aeronutronic, May 27, 1960, Publication No. U-902, Under Contract N-21453	"
1291	<u>Lunar Capsule Supplementary Project Plan</u> , Aeronutronic, June 1, 1960,	"
1292	JPL Spec. No. 30331A, 6 June 1960, Vehicle System Integration, Requirements and Restraints for Ranger Spacecraft A-1 through A-5.	"
1293a	IOM dated Aug. 23, 1961 from G.P. Kautz to Distr., Subject: Langley possible Ranger Follow-on Program (Penetrometer/Accelerometer Experiment)	"
1293b	<u>Preliminary Project Development Plan for A Lunar Penetrometer Experiment for the Follow-on Ranger Program [Blk III]</u> , Langley Research Center, Aug. 18, 1961	"
1294A	<u>Design Proposal for Ranger TV Payload</u> , Vol. I-Technical Presentation prepared by AED of RCA, 25 Aug. 1961, AED 726, RCA Proposal NO. 61526	"
1294B	Letter Contract 950137.	"
1294C	<u>Vol. II - Management</u>	"
1295	Letter dated 6 <del>May</del> Dec. 1961, from H.T. Laskin of Lockheed to F. Duerr, of Marshall Space Flight Center, NASA, subject: Weight and Performance Status--NASA Missions, 1 Dec. 1961.	"
1296	JPL Spec. 30947, <u>Detail Spec, Ranger Follow-on Spacecraft, Vehicle System Integration, Requirements and REstraints</u> , 30 Jan. 1962, [Blk III]	"
1297	JPL Tech. Memo 33-80, <u>Scientific Subsystem Operation: Ranger 3,4,5</u> , H.E. Wagner, Feb. 2, 1962.	"
1298	JPL Tech Memo 33-78, <u>Photographic Resolutions and Coverages Obtainable with the Ranger Impacting Spacecraft</u> , C.F. Campen, K. Heftman, D.E. Wi-lingham, April 6, 1962	"
1299	JPL Tech Memo <del>33</del> 32-272, <u>The Lunar Seismograph Experiment: Ranger 3,4</u> , 5, D.F. Adamski, June 1, 1962	"
1300	JPL Tech Memo 32-335, <u>Development of the Midcourse Trajectory-Correction Propulsion System for the Ranger Spacecraft</u> , D.H. Lee, Mar. 15, 1963	"

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No.	Title	Location
1301	JPL Tech Memo No. 33-127, <u>Science Subsystem Operations, Ranger Follow-on</u> R.P. Del Negro, April 15, 1963	Files
1302	Engineering Document A EDA-161, <u>Ranger Block IV Launch Vehicle/Spacecraft</u> Integration Document, 10 June 1963	W. Lane
1303	Engineering Planning Document EPD-205, <u>RA-6 Investigation Committee, Final</u> Report, 14 Feb. 1964	"
1304	EPD-205, <u>Ranger VI Failure Analysis and Supporting Investigations</u> , 27 March 1964 <i>reported in 2.5</i>	"
1305	JPL Tech. Report 32-663, <u>Ranger Block III Attitude Control System</u> , Will Turk, Nov. 15, 1964	Files
1306	JPL Tech. Report 32-717, <u>The Design of the Ranger Television System to</u> <u>Obtain High-Resolution Photographs of the Lunar Surface</u> , D.H. Kindt and J.R. Staniszewski, Mar. 1, 1965	"
1307	JPL Tech Report 32-471, <u>Trajectory design for Ranger and Mariner Missions</u> V.C. Clarke, Jr., Mar. 1, 1965	"
1308	R.L. Heacock, Ranger: Its Mission and its Results, <u>Space Log</u> , Summer 1965	"
1309	JPL Tech Report 32-829, <u>Development of the Ranger Block III S/C Propulsion</u> <u>System</u> , DD.Evans, T.A. Groudle, R.F. <del>Max</del> Mattson, Mar. 15, 1966	"
1310	JPL Tech. Rept. 32-909, <u>Dynamic Environment of the Ranger Spacecraft:</u> <u>I thru IX, (Final Report)</u> , D. B. Wiksten, May 1, 1966	"
1311a	<i>as below, 27 Dec 1965</i>	
1311b	Engineering Document No. 333, Revised, <u>Ranger Launch Vehicle Integration</u> <u>Summary</u> , W.J. Lane, D.J. Stelma, 27 June 1967	W. Lane
1312		Files
1313	Ranger Spacecraft System Reviews, from Jan. 1962 thru <del>1964</del> <sup>1965</sup>	Files Shelf
1312	Ranger Post Flight Analyses [Starting Aug. 10, 1961]	"
1314	Ranger Project Status Reports No. <u>12</u> to 88, from Burke to Sparks, dated 4/17/61 thru 12/10/62	Files
1315	Ranger Status Reports from Schurmeier to Executive Council, from June 22, 1964 to Jan. 4, 1965	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
1316	Twx dated Sept 7, 1962, from D.L. Forsythe, NASA HQ, to F. Duerr of MSFC, Subject: Procurement of Ranger Follow-on Vehicles.	Files
1317	IOM dated <del>10/8/62</del> 10/8/62 from R.V. Meghreblian to C.I. Cummings, Subject: Busx Contractor Philosophy for Ranger Project	"
1318	IOM dated 10/10/62, IOM from B.T. Morris to J.D. Burke, Subject: Risks of Repeating RA-4 S/C Failure in RA-5 Flight, Significance of CC&S Design Review.	"
1319	Letter dated Oct. 11, 1962 from Burke to Cunningham, Subject: Recommendation to slip schedule for Rangers 6,7, and 8	
1320	IOM dated Oct. 11, 1962, from Cummings to Larson, Jr., Subject: Your memo to Sparks dated 10/8/62	"
1321	IOM dated Oct. 15, 1962, from J.J. Rennilson to C.I. Cummings, Subject: List of Observatories, Instruments and personnel cooperating in Observation of Ranger 5 Impact. [visual]	"
1322	TWX dated Oct. 16, 1962 to D.E. Forney of LMSC/NASA, from J.D. Burke, Subject: RA-10,11 Agena/S/C Interface	"
1323	Document entitled Ranger In-Flight Failures, J. Burke, Oct. 20, 1962	"
1324	Letter dated 18 Oct. 1962 from Roy G. Brereton to Dr. Kuiper, regarding discussions of last Ranger Follow-on TV Experimenters meeting.	"
1325	Engineering Change Order 3703, 10-25-62, Stop heat <del>xxx</del> steril. on all Ranger flight hardware.	"
1326a	IOM 10/29/62 from D. Kindt/P. Buwalda to H.R. Lawrence/G. Kautz, Subject: Camera Performance Improvement Studies for the Ranger Impact TV Subsystem.	"
1326b	Rough Draft SoW, Camera Performance Improvement Studies for the Ranger Impact TV Subsystem.	
1327a	Meeting Report dated Oct. 26, 1962, Subject: Atals-Agena Management Meeting at AFSSD.	"
1327b	NASA Proposal for Revised Booster procurement and Launch Operations dated Oct. 1962	"
1328	IOM 11/2/62 from Burke to Distr., Subject: Rangers 10-14 Approval	"
1329	Letter 11/5/62 from Burke to Cunningham, Subject: Ranger 10-14 Experiment Recommendations.	"
1330	IOM 11/7/62 from D. Willingham/R. Brereton, to Fisher /Kirhofer, Subject: Lunar Impact Point Selections for Ranger Six.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
1331	[Plans for] Ranger 6-25 dated 7 Nov. 1962	Files-
1332	Letter Nov. 9, 1962 from Burke to Kelley, Ranger Review Board, NASA, Subject: Ranger Improvement Measures.	"
1333	IOM 13 Nov. 1962 from D.E. Willingham to P. Feitis, Subject: Impact Points for each month in 1963.	"
1334	IOM 12/3/62 from L.J. Goforth to R.G. <del>Brereton</del> Brereton, Subject: Experimenters' Meeting of Nov. 28, 1962.	"
1335	Letter Dec. 14, 1962 from F. Duerr of MSFC to Burke, Subject: Request for Technical Information.	"
1336	TWX dated Dec. 21, 1962 from Newell to DR. Pickering, verification of JPL TWX which <del>removes</del> removes all steril. requirements from Ranger & Surveyor Projects.	"
1337	Jim Burke's comments on the Ranger Chronology, 1961	"
1338a	Ranger Project Control Schedule, 4-26-61	"
1338b	IOM dated Apr. 28, 1961, from J.D. Burke to Distr., Subject: Ranger Project Review Meeting for May 3, 1961 [Design Change Freeze]	"
1339	Ranger Block III Project Distribution List	In distrib. folder
1340	John J. Gilvarry, "The Wind-Shaved Moon," <u>SR</u> July 6, 1968	Files
1341	IOM dated Aug. 9, 1962 from B.T. <del>Marr</del> Morris to R.V. Meghreblian, Subj: Quality Problems in "Flight" Experiments on JPL Spacecraft.	& Files
1342	LMSC/448617-04, Ranger IV, System Test Evaluation and Performance Analysis Report (35-day Report), May 28, 1962. (S)	CDC
1343	LMSD/49800, Proposal for A Lunar Probe, June 12, 1959 (S) [and submitted to NASA at that time.]	CDC
		Files
1344	A.H. Katz, Discussion in A.A. Mikhailov, "Exploration of the Moon in the U.S.S.R," from an International Symposium sponsored by Douglas Aircraft Co. Inc. Aug. 7-9, 1961 at Caltech in conjunction with the XI General Assembly of the Intern'l Astronomical Union, printed in <u>Space Age Astronomy</u> , ed. A.J. Deutsch, W.B. Klemperer, Academic Press, 1962	
1345	Merton E. Davis, "How good is the Lunik III Photography?" reprinted from <u>Astronautics</u> , May 1960	"
1346	W. Sambrot, "Space Secret," <u>Sat. Eve. Post</u> , Feb. 21, 1959	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
1347	U.S. Air Force Project Rand, Research Memo, "A Photographic System for Close-up Lunar Exploration," M.E. Davis, RM-2183, 23 May 1958.	Files
1348	Amrom H. Katz, "Analysis of Lunik III Photographs," reprinted from the Proceedings of Lunar and Planetary Exploration Colloquium, Mar. 17, 1960.	"
1349	J.D. Burke, 12-7-59, "Design Criteria for Vega Lunar Capsule."	"
1350	IOM dated 12/10/59, from M. Gumpel/R.Sloan/P. Buwalda, <sup>to J.D. Burke</sup> Subject: Lunar Rough Landang—Scientific Experiment, Rough Draft for Committee Review	"
1351	IOM, approx. 2/5/60, from J.W. Sterns to Dist., Subject: Summary of Space Capsule Study Proposals.	"
1352	IOM, Sept. 6, 1961, from R.J. Parks/C.I. Cummings, to: All Concerned, Subject: Agena Flight Schedule for JPL Missions in 1962.	"
1353	IOM dated April 4, 1961 from B. Sparks to: C.I. Cummings/ R.J. Parks/ E. Rechtin, Subject: Weekly Status Reports.	"
1354	IOM dated April 21, 1961 from B. Sparks to: C.I. Cummings/R.J. Parks/ E. Rechtin, Subject: Weekly Project Status Reports.	"
1355a	IOM 12/10/59 from D.H. Lee/L.R. Piasecki, to Dist., Subject: Lunar Capsule Study.	"
1355b	Enclosure to above, by Don Lee, 12.10/59, "Retropropulsion for VEGA Lunar Impact Capsule.	"
1356	IOM 1/7/63 from H.M. Schurmeier, to E. Rechtin, Subject: 2300 MC Communications AD Experiment on Ranger.	"
1357	Conference Report, 14 Jan. 1963, prepared by H. Margraf/G.Haddock, Subject: Initial Meeting at Lewis Research Center, re: Atlas Agena Launch Vehicle Responsibilities.	"
1358	Minutes, Ranger TV Experimenter Meeting, Jan. 28, 1963.	"
1359B	Memo from Homer E. Newell, NASA to All Directors of Centers (inc. JPL) Subject: NASA Agena Program Management.	"
1359A	<i>Report of notes</i>	
1360	IOM Feb. 15, 1963 from H.M. Schurmeier to Dist., Subject: Ranger Project Guidelines.	"
1361	IOM 2/28/63 from H.M. Schurmeier to Technical Div. Chiefs, Subject: Ranger Project Guidelines.	"
1362	NASA, Office of Manned Space Flight, Mar. 1, 1963, "Requirements for Data from Unmanned Spacecraft in Support of Project Apollo."	"

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<u>No.</u>	<u>Ranger</u> <u>Title</u>	<u>Location</u>
1363	J.D. Burke, "Engineering Aspects of the Ranger Project," 7-9-62	File
1364	IOM Mar. 6, 1963 from H.M. Schurmeier to Dist., Subject: JPL Functional Management structure for Ranger RCA TV Subsystem	"
1365	PIO release Mar. 8, 1963, NASA Selects Ranger Industrial Support Firm.	"
1366	IOM Mar. 12, 1963 from W.H. Pickering to All Personnel, Subject: Selection of Northrop as Ranger Subcontractor	"
1367	IOM Mar. 19, 1963, from Spacecraft System Manager [A.E. Wolfe] to Ranger Distribution: Subject: Ranger Block 4 Schedule & Guidelines	"
1368a	Agenda for <del>Rimarkary</del> Planetology Subcommittee of the NASA Space Sciences Steering Committee (Meeting No. 3), Mar. 4, 5, and 6 1963	"
1368b	IOM Mar. 22, 1963 from H.W. Washburn to <del>Mefgx</del> Meghreblian, Report of Colloquium on Nature of the Lunar Surface held Mar. 4, 1963	"
1369	IOM Mar. 28, 1963 from Burke to Schurmeier, Sub: Ranger Block 5 Missions	"
1370	Letter from Newell to Walter E. Brown, JPL, April 1, 1963 re science experiments for Block V.	"
1371 <i>a, b, c</i>	First Draft of Spec. No. R4-2-110, April 1, 1963, "Ranger Block 4 Mission Objectives and Design Criteria"	"
1372	IOM April 5, 1963 from R.J. Parks, to Div. Chiefs, Div. Mariner C & Ranger Project Reps., Subject: Change Control Procedure	"
1373	IOM June 21, 1963 from C.F. Campen to D. Kindt, Subj: Block IV, TV Subsystem--Camera Angles.	"
1374	IOM June 24, 1963 from Schurmeier to Dist., Subj: Ranger Block IV Schedule"	"
1375	IOM [Approx. July 1963] from Crabtree to Dist. Subject: Assignments of Test Directors to RA-6 and 7, Ranger Block 3.	"
1376	IOM 7/24/63 from H. Schurmeier/K. Coon to Dist., Subj: JPL-Northrop Responsibilities for Ranger Block V.	"
1377	"Exploring the Moon from Baikonur and Cape Kennedy, <u>Soviet Life</u> , Aug. 1969	"
1378	Seismological Laboratory, Caltech, <u>Final Report, A SEismometer for Ranger Lunar Landing</u> , F.E. Lehner, <del>ex</del> E.O. Witt, W.F. Miller and R.D. Gurney, May 15, 1962	Library (102811)

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<u>No.</u>	<u>Title</u>	<u>Location</u>
1379a	W.H. Pickering, "Eratosthenes No. 4," <u>Popular Astronomy</u> , Feb. 1924	Files
1379b	" " "The Real Uses of Astronomy, Sidereal and Planetary," <u>Popular Astronomy</u> , Feb. 1924	"
<del>1379b</del>		
1379c	W.H. Pickering, "The Lunar Atmosphere," <u>Popular Astronomy</u> , Feb. 1924	"
1379d	" : "Eratosthenes, No. 5," <u>Popular Astronomy</u> , Feb. 1924	"
1379e	" " "Erathosthenes, No. 6," " Aug 5/1 1924	"
1380	Telecon interview with J. Burke by RC Hall, 9-11-69	"
1381	Nicholas Wade, "Three Origins of the Moon," <u>Nature</u> , Vol. 223, July 19, 1969.	"
1382	J.J. Gilvarry, "Mensuration and Isostasy of Lunar Mascons and Maria," <u>Nature</u> , Vol. 223, July <del>19</del> 19, 1969.	"
1383	IOM dated June 27, 1963 from R.L. Heacock to C.F. Capen, Subject: Ranger Series Reprograming	"
1384	Statement of Work for Ranger Block 5 Seismometer Survival Sphere Preliminary Design, 8/14/63, J.D. Burke	"
1385	Ranger Block V System Spec., rough draft, 9-3-63.	"
1386	Memorandum of Agreement, 9/6/63 [Re TV Experiment]	"
1387	IOM Sept. 27, 1963, from R.G. Brereton to Dist., Subject: Resume of Comments and Suggested New Work for the General Motors Program on Impact Flash.	"
1388	IOM Oct. 29, 1963, from G. Robillard to Dist., Minutes, Ranger Spacecraft Block V Review meeting held 10/29/63.	"
1389	IOM Oct. 31, 1963 from R.J. Parks to Ranger, Mariner, Surveyor Personnel, Subject: Ranger Block III flights.	"
1390	Document entitled, "RAFO TV Test Program," J. Burke, no date.	"
<del>1391</del>		
1391	Interview with J.D. Burke, regarding Ranger, Jan. 27, 1969	"
1392	Interview with John Small, regarding Ranger, Dec. 6, 1968	"



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<u>No.</u>	<u>Title</u>	<u>Location</u>
1393	"NASA: Trouble in Paradise", <u>Newsweek</u> , 9/22/69	Files
1394	Letter dated Jan. 15, 1960 from Abe Silverstein to Dr. Pickering, regarding periodic meetings of top level management of Centers and Hq. staff offices.	"
1395	Letter dated Jan. 25, 1960 from Abe Silverstein to Dr. Pickering, assigning to JPL responsibility for monitoring NASA R&D contracts.	"
1396a	Cover letter dated Jan. 13, 1960, signed by A. Silverstein and O.J. Ritland, with procedures attached for NASA/AFBMD Management Agreement	"
1396b	NASA/AFBMD Management Procedures, 1/13/60.	"
1397	Letter Feb. 18, 1960 from Dr. Pickering to Abe Silverstein re DSIF	"
1398	Letter Mar. 14, 1960 from Abe Silverstein to Dr. Pickering re tentative lunar and planetary programs extending to 1965. <i>(Summary)</i>	"
1399	Memo for <del>Director</del> Associate Director dated Feb. 3, 1960, from G. W. Brooks [Langley?] Subject: Comments on G.E. Proposal on Project LIVE.	"
1400	IOM 2/8/60 from W. Downhower to H. Schurmeier, Subject, Review of G.E. Proposal Project LIVE.	"
1401	Letter March 3, 1960 from B. Sparks, to E. Cortright, Subject: G.E. Co. Proposal Project LIVE	"
1402	Letter March 22, 1960 from Dr. Pickering to Dr. Newell, commenting on rough draft submitted by NASA entitled "Responsibilities and Steps in the Establishment and Conduct of the Space Sciences Program."	"
1403	Letter Mar. 31, 1960 from Abe Silverstein to Dr. Pickering, regarding scientists' problems within NASA.	"
1404	Part IV of NASA Management Manual, April 5, 1960, Subject: Establishment and Conduct of Space Sciences Program--Selection of Scientific Experiments	"
1405a	Memorandum from Abe Silverstein dated April 12, 1960, Subject: Official code names and designations for scheduled flight missions.	"
1405b	Letter May 10, 1960 from Oran W. Nicks to C.I. Cummings, attaching latest approved numbering system for satellite and probe shots.	"
1405c	Letter, May <del>196</del> 16, 19, 1960 from Abe Silverstein to Dr. Pickering, attaching latest approved numbering system for satell. & probe shots.	"
1406	Minutes, Space Exploration Program Council Meeting, Apr. 25-26, 1960	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
1407	Letter dated April 25, 1960 from Dr. Pickering to Dr. Silverstein re decision not to use radioisotope power sources in Lunar S/C thru 1962.	Files
1408	Letter dated May 20, 1960 from Dr. Silverstein to Dr. Pickering asking several questions regarding launches R <del>m</del> P-32 thru P-36.	"
1409	Memo for Record dated May 12, 1960 signed by Ben Milwitzky and Oran <del>Nicks</del> Nicks, Subject: Summary of Visit-NASA HQ. to JPL, May 2-4, 1960.	"
1410	Letter May 24, 1960 from Dr. Rechtin to NASA requesting frequency allocation for future use for DSIF.	"
1411a	Letter dated May 23, 1960 from Abe Silverstein to Dr. Pickering, enclosing Summary Minutes of Space Sciences Steering Committee of May 9, 1960.	"
1411b	Summary Minutes of Space Sciences Steering Comm. of May 9, 1960	"
1412	Letter dated May 27, 1960 from W.H. Pickering to Homer E. Newell, submitting resignation from the Rocket and Satellite Research Panel.	"
1413	Letter June 7, 1960 from Jim Burke to E.M. Cortright, Subject: Alternate Mission for <del>A2z</del> second Ranger flight.	"
1414	IOM June 14, 1960 from C.R. Gates to All Concerned, Subject: Launch to Injection Instrumentation	"
1415	Letter dated June 17, 1960 from Dr. Pickering to Abe Silverstein, Subject: Master Development Plan for NASA Technical Vehicles at the Atlantic Missile Range.	"
1416	Minutes, Space Exploration Program Council Meeting, Feb. 10-11, 1960 [First Meeting]	"
1417a	Letter dated June 22, 1960 from W.H. Pickering to Mr. A.S. Hodgson Director of Management Analysis, NASA, enclosing minutes of the May 6-7 meeting with the Advisory Committee on Organization, to be used instead of those prepared by McKinsey & Co.	"
1417b	Minutes of May 6-7 meeting cited above.	"
1417c	Letter from A.S. Hodgson, NASA dated June 1, 1960 enclosing minutes of May 6-7 prepared by McKinsey	"
1417d	Minutes of May 6-7, 1960 cited above.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
1418a	IOM dated July 5, 1960 from C.I. Cummings to Dr. Pickering, Sub.: Recommendations as <del>21</del> Subjects for Space Exploration Council Meeting	Files
1418b	Minutes, Space Exploration Program Council Meeting, 14-15 July 1960	"
1419	Letter dated July 12, 1960 from Abe Silverstein to Dr. Pickering, giving approval to statement of work of proposed JPL contract with RAND.	"
1420	Letter from Abe Silverstein dated July 11, 1960 to Dr. Pickering, regarding sterilization procedures.	"
1421	Letter dated Sept. 1, 1960 from Brian Sparks to John D. Young of McKinsey & Co. enclosing review of Chapters 2,3, and 4 of "Evaluation of NASA Contracting Policies, Organ. and Performan."	"
1422	Letter dated Aug. 30, 1960 from E.M. Cortright to Brian Sparks, enclosing telephone Directory [Hq.] in lieu of requested organ. chart.	"
1423a	Agreement Between the DOD and NASA concerning the Aeronautics and Astronautics Coordinating Board, Sept. 13, 1960	"
1423b	Roster, Members of DOD-NASA Aeronautics and Astronautics Coordinating Board, SEPT. 1960	"
1424	Letter dated Sept. 16, 1960, from Cummings to E.M. Cortright, citing four scientific experiments proposed by GSFC for S/C 3,4 and 5	"
1425a	Letter dated Sept. 28, 1960 from W.H. Pickering to Dr. Hugh L. Dryden submitting outline of presentation to be made at Williamsburg	"
1425b	Outline of presentation at Panel discussion on "The Future of NASA," to be made at Williamsburg.	"
1426	Document , October 12, 1960 entitled, "NASA, Report of the Advisory Committee on Organization," [Kimpton Committee]	"
1427a	Memorandum dated Oct. 14, 1960 from T. Keith Glennan, to Participants at Williamsburg Conference, Subject: Staff Paper on Project Management.	"
1427b	"A NASA Structure for Project Management," dated 10/14/60 attach. to above.	"
1428	NASA, Fourth Semi-Annual Staff Confefence, Williamsburg, Va., Oct.16-19, 1960, portion entitled "Organization and Functions of AACB."	"
1429	Letter dated Oct. 18, 1960 from G.L. Hobby to J. Posner, of NASA submitting memo expressing recommendation of Sterilization Committee. (attachment missing.)	"
1430	Letter dated Oct. 24, 1960 from George L. Hobby to Dr. Quimby, NASA, re sterilization.	"

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## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1431	TWX dated Oct. 24, 1960 from J.D. Burke to E.M. Cortright, regarding NASA assistance for AEDC tests of Ranger capsule retromotor	Files
1432	Letter dated 31 Oct. 1960 from T. Keith Glennan to Dr. W.H. Pickering, regarding Frank Goddard's completion of assignment with NASA.	"
1433	Letter dated Nov. 8, 1960 from Dr. Pickering to Dr. R.C. Seamans, re NASA Reliability Assessment Program.	"
1434	Letter dated Nov. 23, 1960 from Dr. Pickering to Mr. A.B. Hodgson of NASA remarking on the Klimpton Report.	"
1435a	Letter dated Nov. 26, 1960 from E.M. Cortright to Brian Sparks, regarding lack of cooperation between JPL and NASA with respect to <del>many</del> copies of correspondence.	"
1435b	Letter dated July 5, 1960 from Abe Silverstein to Dr. Pickering requesting all info copies of all correspondence from JPL to NASA be sent to Cortright.	"
1436	Letter dated Dec. 13, 1960 from J.D. Burke to E.M. Cortright, re sterilization.	"
1437	Letter dated Dec. 22, 1960 from C.I. Cummings to E.M. Cortright, re setting up of a board to look into problem with the Atlas.	"
1438	Letter dated Dec. 27, 1960 from W.H. Pickering to R. C. Seamans, re launch vehicle characteristics.	"
1439	Letter dated Jan. 4, 1961 from A.F. Siepert, Director of Business Administration of NASA to V.C. Larsen, Jr. re JPL procurement policy manual and procurement procedures.	"
1440	Letter dated Feb. 3, 1961 from J.D. Burke to R. Pace Jr, NASA Tech. Rep. at Lockheed, Subject: Ranger/Agna 3 Program Procedure for Establishing Meetings with LMSD.	"
1441	Letter dated Feb. 13, 1961 from J.D. Burke to Oran W. Nicks, Subject: RA-2 Lunar Fly-by Alternate Mission.	"
1442	Letter dated Feb. 18, 1961 from Abe Silverstein to Dr. Pickering, distributing 4-1-1 and also designating JPL project manager for Ranger.	"
1443	Letter dated Feb. 23, 1961 from J.N. James to NASA [Kochendorfer] criticizing the issue of the PMP.	"
1444	Letter dated Feb. 23, 1961 from W.H. Pickering to Dr. Abe Silverstein, answering Dr. Silverstein's letter of Feb. 16 re 4-1-1.	"
1445	Letter dated Jan. 17, 1961 from Pickering to Glennan, saying goodbye to him after two years of Administrator of NASA [not sure it was sent].	"

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1446	Summary of Presentations and Discussions, Fifth Semi-Annual Staff Conference, NASA, Luray, Virginia, Mar. 8-10, 1961.	Files
1447	Memorandum of Understanding, dated 28 Mar. 1961, signed by B.A. Schreiver and Robert C. Seamans, Subject: Launch Stand Loading Schedules.	"
1448	Letter dated April 14, 1961, from Jack Posner, NASA, to George Hobby, JPL, re sterilization.	"
1449	Phone message dated April 17, 1961 from Cortright to Cummings, re staff paper requested by Abe Silverstein.	"
1450a	Memo to Directors dated April 28, 1961 from R.C. Seamans, Subject: Establishment of Sequenced Milestone System.	"
1450b	Document dated 4-28-61 entitled "NASA Sequenced Milestone System (SMS)	"
1451	Letter dated June 9, 1961 from Dr. Pickering to Dr. Seamans, regarding problems at AMR.	"
1452a	Letter from James Webb dated June 29, 1961 to Dr. Pickering regarding draft of a letter to DuBridge to plan discussions for meeting.	"
1452b	Letter <del>to</del> dated June 29, 1961 from Webb to DuBridge trying to get scientists throughout the country together for discussions.	"
1453	Letter dated <del>July 2</del> June 30, 1961 from E.M. Cortright to C.I. Cummings regarding Ranger Vidicon system and sterilization.	"
1454	Letter dated July 6, 1961 from C.I. Cummings to E.M. Cortright, answering above letter.	"
1455a	Letter dated July 20, 1961 from W.H. Pickering to Abe Silverstein, enclosing report for inclusion in Astronomical Journal	"
1455b	Report entitled "Reports of Observatories," dated July 20, 1961 for inclusion in Astronomical Journal.	"
1456	Twx dated Aug. 9, 1961 from Dr. Pickering to Dr. Silverstein, giving a summary of difficulties encountered with S/C, Launch vehicle, and supporting equipment at cape.	"
1457	Letter dated Oct. 3, 1961 from Abe Silverstein to Dr. Pickering, re problems at AMR, referencing June 9, 1961 letter [2-1451]	"
1458	Letter dated Oct. 6, 1961 from H. Dryden, NASA to Dr. Lloyd V. Berkner, Pres. Graduate Research Center, Inc., explaining organizational changes that have taken place in NASA.	"
1459	TWX dated Oct. 19, 1961 from J.D. Burke to Ben Milwitzky, giving status of Ranger P-32 to P-36 for Sept. thru Nov., 1961.	"

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1460a	Letter dated Oct. 17, 1961 from V.C. Larsen Jr. to Dr. Silverstein, Subject: Data Operations Command Facility Summary and Index.	Files
1460b	NASA, Fiscal Year 1962 Estimate, Data Operations Command Facility Summary and Index, Rev. 10/9/61.	"
1461a	Letter dated Oct. 20, 1961 from J.M. James to Chas. Sonett, NASA, regarding four action items.	"
1461b	Attachment to above MR-2-110 dated 29 Sept. 1961, entitled, "Mission Objectives and Design Criteria."	"
1462	Letter dated Oct. 24, 1961 from W.H. Pickering to James E. Webb, re <del>President Johnson</del> Vice-President Johnson's visit.	"
1463	Letter dated Oct. 30, 1961, from Abe Silverstein to Dr. Pickering, requesting that JPL give personal attention to problems apparent in the Ranger and Ranger Follow-on programs and keep the new Office of Space Sciences advised.	"
1464	Letter dated Nov. 15, 1961 from W.H. Pickering to DR. R.G. Seamans, regarding launch schedule for Ranger 3	"
1465	TWX dated Nov. 21, 1961 from J.D. Burke to Ben Milwitzky, giving status" of Ranger P-32 to P-36 for Oct. thru Dec. 1961. <i>as of 10/31/61.</i>	"
1466	Letter dated Dec. 4, 1961 from R.C. Seamans to Dr. Pickering, re Ranger 3 and answering letter of Nov. 15 from Pickering [2-1464].	"
1467	Letter dated Dec. 13, 1961 from R.P. Young of NASA to Dr. Pickering, inviting him to a Semi-annual management conference at Lewis on Jan. 11-12, 1962.	"
1468	Letter dated Dec. 18, 1961 from E.M. Cortright to Dr. Pickering, giving holiday wishes.	"
1469	Letter dated Dec. 21, 1961 from H.E. Newell to Dr. Pickering, approving the FY 1962 JPL Operating Plan.	"
1470	Letter Dated Dec. 26, 1961 From H.E. Newell to Dr. Hibbs inviting him to participate in the Ranger program of lunar S/C designed for acquisition of lunar surface photographs.	"
1471	Letter dated 27 Dec. 1961 from Oran W. Nicks to <del>Robert</del> Clif. Cummings re TV experiment.	"

## Source List #2

## RANGER

No.	Title	Location
1472	Arthur Hill, "Unhappy Scientists Wait for Sign of NASA Shift," <u>Houston Chronicle</u> , Aug. 31, 1969.	Files
1473	S. Fred Singer, "What Origin for the Moon?" <u>A &amp; A</u> , Oct. 1969	"
1474	NASA, "Abstracts of the NASA National Conference on Spacecraft Sterilization" Technology, Nov. 16, 17 and 18, 1965	"
1475 a	IOM Oct. 4, 1962 from G.P. Kautz to Ranger Bus Contractor Committee, Subject: Divisional <del>xxxxxx</del> ratification of Bus Contractor Concept.	"
1475 b	Ranger Project Office, Bus Contractor Philosophy, 10/4/62	"
1476	Comment Draft Chapter <del>fx</del> of Gemini narrative history, Chapter: Planning the Experiments, (by Grimwood)	"
1477	Memo for Record, Interview with Dr. H.J. Stewart, Oct. 22, 1969	"
1478	<i>Final Report of the Ranger Board of Inquiry 11/30/69 NASA, Chairman Albert J. Keller. (Secret)</i>	<i>Pickering Office</i>
1479	Interview with Brooks Morris 9/30/69	Files
1480	Technical Report No. 32-55, <u>Scientific Experiments for Ranger 1 and 2</u> , Jan. 3, 1961.	"
1481	Technical Report No. 32-199, <u>Scientific Experiments for Ranger 3, 4 and 5</u> Dec. 5, 1961.	"
1482	Lunar and Planetary Exploration Colloquium, NAA, Vol. 2, 1959-61	7 629.1251 Library
1483	NASA from Nicks to Cortright, Dec. 21, 1961, Sub: Plans for Ranger 3 meeting on Dec. 28 at JPL. [Includes Agenda]	Files
1484	Memo for Assoc, Admin, Sept. 28, 1961 from Abe Silverstein, Subject: Procurement of TV capsules for Ranger Follow-on missions	"
1485	Letter Sept. 13, 1961 from O.W. Nicks to E.D. Burke, offering congrats. on launching of Ranger 1.	"
1486	<sup>Cortright</sup> TWX June 2, 1961, from <del>xxxxxx</del> to Dr. Pickering, requesting that Parks and Cummings review results of JPL efforts on Extension of Ranger program.	"
1487	<sup>aab</sup> NASA memo June 1, 1961 from O.W. Nicks for the Ass't Dir. of Lunar & Planetary programs, Subject: Items requiring Review and Detection by the director of OSFP.	"
1488	Letter Nov. 14, 1962 from O.W. Nicks to Dr. Pickering confirming NASA's understanding of discussion of Nov. 1.	"
1489	Letter Oct. 24, 1962 from Dr. Urey of UC San Diego to Dr. Newell, NASA, (see 2-362)	"

Source List #2  
Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1490	<del>Letter</del> Memo, Feb. 17, 1964, from O.W. Nicks, SL/Director, Lunar and Planetary Programs, to SL Staff, Subject: Management Resassignments.	Files
1491	Memo to Director, OSS, Mar. 26, 1962 from Maurice Dubin, Head, Aeronomy Program, Geophysics and Astronomy Programs, OSS, subject: Considerations and Recommendations of Manned Space Exploration following interview with John Glenn.	"
1492	Letter dated April 9, 1962 from E.M. Cortright to Dr. Pickering, refusing funding for launching RA-2A.	
1493a	Memo from O.W. Nicks, 3 Aug. 1962 for Assoc. Director of OSS, Subject: Suggested Revision of NASA Management Manual 37-1-1.	"
1493b	Letter from Dr. Pickering June 13, 1962 to Oran Nicks transmitting <del>1493a</del> . 1493c.	
1493c	JPL document entitled SUGGESTED REVISION OF NASA MANAGEMENT MANUAL, PART IV, CHAPTER 37, NO. 37-1-1, EFFECTIVE DATE APRIL 15, 1960, dated June 13, 1962.	"
1494	Memo for Mr. A. Hyatt, 10 Feb. 1959, from Milton W. Rosen, Rocket Vehicle Development, Subject: Proposed Plan of Action on THOR-DELTA and VEGA	"
1495	NASA, Memo to R. Rosen from R. Snodgrass, 26 Feb. 1959, Subject: Convair-JPL Conference on Vega.	
1496	Memorandum [NASA] from Abe Hyatt, 13 Aug. 1959, to The Administrator, Deputy Admin. et. al., Subject: G.E. makes first full duration run of second stage Vega engine.	"
1497	NASA Memo for Glennan, Dryden, Horner and Silverstein, 21 Sept. 1959 from A. Hyatt, Asst Dir. for Propulsion, Subject: First successful long duration testing of the Vega Engine.	"
1498	NASA, Memo Mar. 28, 1960, from R.A. Wasel, Acting Chief, Solid Rocketa To Mitchell, Subject: JPL Ranger Program.	"
1499	NASA, Memo, June 13, 1960 from Mitchell [LP] to Hyatt [LD], subject: Comments on the JPL Summary of Support by the NASA Budget Committee.	"
1500	NASA Memo dated Jan. 3, 1961 from O.W. Nicks to Ax Technical Assistant to Director of Space Flight programs, Subject: Status of Ranger Items for Program Management Review.	"
<del>1491</del> 1501	NASA, <u>Current News</u> , August 6, 1964, "Ranger 7" Nationwide press re- <del>1494</del> action of Ranger VII success.	"
<del>1492</del> 1502	JPL, "68 Hours to the Moon," n.d.	"
<del>1493</del> 1503	<del>Rebxxxxxxxx</del> Memo for Director, Business Administration, NASA from A.O. Tischler, Chief, Liquid Fuel Rocket Programs, Subject: JPL Contract (\$2,000,000) Jan. 22, 1959.	"



## SOURCE LIST #2

<u>No.</u>	<u>Title</u>	<u>Location</u>
1504	NASA SP-108, <sup>craft</sup> Space Sterilization Technology, Beckman Auditorium, Pasadena, Calif. Nov. 16-18, <del>16</del> 1965.	Bookcase
1505	OSSA Review, Mar. 9, 1965, Doc. from N.W. Cunningham entitled, OSSA Review of Mar. 9, 1965.	<i>also file</i> Library
1506	OSSA Review Mar. 26, 1964, <sup>OK</sup> N.W. Cunningham, Ranger Program Status Report "	"
1507	OSSA Review, June 7, 1965 (n.g.)	"
1508	OSSA Review, Sept. 9, 1965 (n.g.)	"
1509	OSSA Review, Dec. 9, 1964 <i>OK</i>	" <i>also file</i>
1510	Letter dated Sept. 5, 1962 from Homer Newell to Dr. Pickering, replying to letter of May 17 regarding the Astronomy Subcommittee of Space Sciences Steering Committee.	File
1511	Letter Jan. 19, 1965 from Homer Newell to G.E. Mueller, Director of OMSF, Subject: Ranger 8 <del>Ex</del> Lunar Target Selection	"
1512	Letter dated Jan. 25, 1965 from N.W. Cunningham to Files, Subject: Ranger 8 Spacecraft Acceptance Meeting	"
1513	Letter Feb. 9, 1965 from N.W. Cunningham to SD/Deputy Assoc, Admin for Space Science & Applications, Subject: Ranger 8 Prelaunch Status Review at ETR	"
1514 a	Letter Feb. 11, 1965 from H.E. Newell to Assoc, Admin. for Manned Space Flight, Subject Ranger 8 Target Selection	"
1514 b	Letter Feb. 9, 1965 from O.W. Nicks, enclosure <del>xxxx</del> to above, entitled Ranger 8 Target Selection Review and Final Recommendations	"
1515	Letter Feb. 24, 1965 from N.W. Cunningham to SD/Deputy Assoc. Admin. for Space Science and Applications, Subject: Ranger 9 S/C Acceptance Meeting.	"
1516	Letter Mar. 1, 1965 from N.W. Cunningham to Files, Subject: Early Release of Ranger VIII Data	"
1517	Letter Mar. <sup>10</sup> <del>20</del> , 1965 from O.W. Nicks to S/ Assoc. Admin for Space Science and Applications, Subject: Ranger D site selection.	"
1518	Letter Mar. 15, 1965 from H.E. Newell to AA/DR. Robert C Semmans Jr. Assoc. Admin., Sub: Ranger 9 Lunar Aim Point Priorities	"
1519	Letter Mar. 19, 1965 from N.W. Cunningham to O.W. Nicks [SL], Director Lunar and Planetary Programs, Sub: Ranger 9 Prelaunch Status Review	"
1520	Letter May 18, 1965 from N.W. Cunningham to SL, O.W. Nicks [above] subj: Ranger Program Close-out Activities and Recommendations for FY 1966	"

Source List #2  
RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
1521	Memo dated May 24, 1965 from N.W. Cunningham to O.W. Nicks Subject: Ranger Residual Inventory and Disposition.	Files
1522	Memo dated May 28, 1965 from O.W. Nicks to N.W. Cunningham Subject: Ranger close-out activities and temporary assignments.	"
1523	Memo dated Oct. 29, 1965 from N.W. Cunningham to SL/Director, Lunar and Planetary Programs, Subject: Ranger Hardware Disposition.	"
1524	Letter dated 2 Dec. 1965, from O.W. Nicks to Gen. Ex Luedecke, regarding disposition of Ranger hardware.	"
1525	IOM 31 Aug. 1961 from J.D. Burke/H.M. Schurmeier, to Ranger Pprogram Dist. Lists 6 and 7, Subject/ S/C System Manager for Ranger. [Allen E. Wolfe]	"
1526	Memo for Executive Assistant, Lunar & Planetary Programs, from N.W. Cunningham, Chief, Ranger Program, Subject: Ranger PAD	"
1527a	Letter from J.R. Arnold, Oct. 30, 1962, TATA Institute of Fund- amental Research, Colaba, Bombay, India, re: failure of Ranger Ex 5, the seismograph, to Dr. Newell.	"
1527b	Cable, From J.R. Arnold, India, re Ranger 5 and addressed to Dr. Newell, dated Oct. 31, 1962. Letter follows.	"
1527c	Letter from Homer Newell to J.R. Arnold of India, <del>xxx</del> in answer to Oct. 30, 1962 letter.	"
1528	Document, no date, entitled, Ranger 6 Diode Failure Report (About <del>Sept.</del> 1963.)	"
1529	Letter from Jarrett to R.C. Hall, approx. Dec. 1962, relating to LOC/LVOD.	"
1530	IOM dated Oct. 15, 1962 from A.O. Tischler to M. Rosen, Subject: Expansion of Nova vehicle study by the Boeing Co.	"
1531	Letter from A.O. Tischler to Dr. Pickering, May 29, 1962, re Nova vehicle.	"
1532	Exhibit A to Contract NAS 3-3806 LeRC to Lear Siegler [Study] Ranger 6 Launch Vehicle System Success Analysis, Sept. 23, 1963. <del>xx</del>	"

SOURCE LIST #2  
RANGER

<u>No.</u>	<u>Title</u>	<u>Location</u>
1533	Interview with Al Wolfe, Nov. 5, 1969	Files
1534	<del>MX</del> IOM dated 8/5/60 from W.E. Giberson to Div. 34 Engineers, Subj: Environmental Testing, Guidance & Control Equipment, for RA-1, 2	"
1535a	IOM 10/26/61 from N.F. Jacobson to J.D. Burke, Subject: Recommendations for a Policy and Requirements Document for the Ranger Follow-on.	"
1535b	IOM 8-28-62 from J.D. Burke to Distribution, Subj: Ranger Spacecraft Specifications.	"
1535c	IOM 12-18-62 from Jack Keyser to Bud Berger, Subject: Comments on EPD 65 relative to Engineering Documentation.	"
1536	Rough Draft of RANGER FOLLOW-ON PROJECT POLICY AND REQUIREMENTS dated 27 Nov. 1961 [became EPD 65]	"
1537	Rough Draft of EPD-65, RANGER FOLLOW-ON PROJECT POLICY AND REQUIREMENTS dated 5 Jan. 1962	"
1538	EPD-65 dated 1/18/62, RANGER FOLLOW-ON PROJECT POLICY AND REQUIREMENTS	"
1539	Revision of EPD-65 [Rough Draft] entitled, RANGER 6-8, PROJECT <del>REKXXX</del> POLICY AND REQUIREMENTS 23 January 1963	"
1540	Second <del>mxk</del> revision of EPD-65 dated 4 Feb. 1963, entitled RANGER BLOCK 1, PROJECT POLICY AND REQUIREMENTS	"
1541	Third Revision Draft of EPD-65, dated 27 Feb. 1963, RANGER BLOCK 3 PROJECT POLICY AND REQUIREMENTS.	"
1542	Report from RCA dated September 1962, EM-61-421-29, File No. EM 8337, RANGER TELEVISION SUBSYSTEM ANALYSIS.	"
1543	Letter from Fairchild Stratos dated Jan. 5, 1963 to Bud Love of JPL Subject: Additional General Comments for Ranger 6-9 Reliability Study.	"
1544a	IOM <del>dated</del> undated (about Feb. 1963) from H.J. Margraf to H.M. Schurmeier, et. al. Subject: Approval of attached Minutes.	"
1544b	Document <del>dated</del> entitled MINUTES OF MEETING OF NASA, MSFC, SSD, AND JPL CONCERNING RANGER AND MARINER PROGRAM PLANS AT JPL ON 23 and 24 JANUARY 1963.	"
1545	Ranger Quarterly Review Minutes JPL 19 Feb. 1963, Gordon Kautz	"
1546	" " " " " " " " A.E. Wolfe	"
1547	IOM from Schurmeier to Technical Div. Chiefs, 2/28/63, Subject: Ranger <del>mx</del> Project Guidelines.	"

(a) EPD 65 Addendum  
(b) EPD 65

# SOURCE LIST #2

## Ranger

<u>x No.</u>	<u>Title</u>	<u>Location</u>
1548	IOM dated 2/22/63 from G.E. Sweennam to M.R. Mesnard, Subject: Proposed Split Power System Configuration for Block III Ranger.	Files
1549	JPL Spec. RL-3-110A, dated 12 Feb. 1962, P53 (RA-6), P54 (RA-7) <del>XXXX</del> P55 (RA-8) and P56 (RA-9) Spacecraft Design Characteristics and Restraints Design Characteristics	"
1550	IOM Feb. 26, 1963 from R.L. Heacock to Distr., Subject: Ranger TV System Review Meeting	"
1551	TWX dated 9 May 1963 from D. Kindt/C.J. Bennett of JPL to RCA re: Design Review.	"
1552	IOM from W.G. Leflang dated Aug. 28, 1963 to D.H. Kindt, Subject: Comments on RCA Communications Design Review of 8/23/63.	"
1553	IOM from D.H. Kindt to A.E. Wolfe dated 8/20/63 Subject: Request for Waiver on TV Subsystem Design Review	"
1554 <del>ax</del>	IOM from A.E. Wolfe to W. Downhower/D. Kindt 8/23/63, Subject: TV Subsystem Design Review.	"
1555	IOM dated March 14, 1963 from R. Heyser to R.L. Heacock, Subject: RCA Goldstone Station Readings	"
1556	IOM 3/27/63 from A.P. Bowman to H.M. Schurmeier, Subject: Ranger Block III and Block IV Terminal Sterilization (Ethylene Oxide-ETO) Compatibility Requirements	"
1557	TWX dated Apr. 2, 1963 from O. Nicks, to Robert Parks re sterilization.	"
1558	Proposal for a Vidicon Improvement Program for the Ranger TV Subsystem, dated 26 Mar. 1963 by AED, RCA.	"
1559a	IOM dated April 5, 1963 from Schurmeier to Goddard, Subject: Summary of Ranger Sterilization Experience.	"
1559b	Attachment to above, IOM dated 4/5/63 from Ranger Project Office to Dr. F.E. Goddard, Subject: Ranger Sterilization Experience.	"
1560	IOM from A.Bowman/J. Schlue dated 4/11/63 to H. Schurmeier, Subj: Ranger Ethylene Oxide Gas Sterilization Compatibility Test Cost Study	"
1561a	Letter dated 17 April 1963 from H.E. Newell to Director of JPL Subject: Security Classification of Launch Dates.	"
1561b	Attachment to above, rough draft dated 3/25/63 entitled: SUBJECT: SECURITY CLASSIFICATION OF INFORMATION CONCERNING LAUNCH DATES OF NASA VEHICLES AND SPACECRAFT.	"
1562	Letter, Apr. 24, 1963 from R.J. Parks to O.W. Nicks, Subject: Terminal Sterilization of Ranger Spacecraft	"

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1563	IOM 1/7/63 from H.M. Schurmeier to E. Rehtin, Subject: 2300 MC Communications AD Experiment on Ranger. <i>2-1356</i>	Files
1564	IOM 2/22/63 from H.M. Schurmeier to W.H. Pickering, Subject: Summary of Problem Areas presented in Senior Staff Meeting 2/16/63.	"
1565	Document stamped PRELIMINARY dated <del>12/8</del> 12/4/62, "Guidelines for Ranger Project Programming," JPL Discreet.	"
1566	IOM datd Jan. 8, 1963 from Schurmeier to Ranger Design Team Design Review Board, Subject: Clarification of the Ground Rules for Ranger Redesign and Design Review Effort.	"
1567	Outline for meeting at Hq. 2/12/ and 2/13/63.	"
1568	IOM 2/28/63 from H. M. Schurmeier to Technical Division Chiefs, Subject: Ranger Project Guidelines.	"
1569	IOM 3/1/63 from Spacecraft System Manager to Ranger Dist, Subject: Ranger Block 3 Spacecraft Schedule, Revision A.	"
1570	TWX 3/4/63 from J.James to LMSC, Mr. T.H.Luskin explaining meanings of Block nomenclature.	"
1571	TWX Mar. 7, 1963 from Schurmeier to N.W. Cunningham explaining program plan [Ranger Administrator's REport]	"
1572	IOM 19 Mar. 1963 from Spacecraft System Manager to Ranger Distr. Subject: Ranger Block 4 Schedule and Guidelines	"
1573	Minutes from 3/13/63 through <u>3/8/65</u> , Ranger Bi-Weekly Project Mtgs.] <i>12/22/64</i>	"
1574	JPL Spec. RL-3-120, dated 20 Nov. 1961, Design Characteristics and Restraints, Design Restraints.	Files
1575	Ranger Block III Project Development Plan, Project Doc. 8, 31 Oct.1963	"
1576	Ranger 64 Scientific <del>ex</del> Experiments, R.G. Brereton, Feb. 7, 1963	"
1577	IOM Mar. 4, 1963 from C.F. Campen to Schurmeier, Subject: Objectives of Ranger Block Four Missions	"
1578	IOM dated 3/7/63 from D. Alcorn to A. Wolfe, Subject: Ranger Block IV Mission Objectives	"
1579	TWX sent 4/1/63 from Schurmeier to Cunningham, re mission objectives for Ranger Block 4.	"
1580	Letter April 8, 1963 from Cunningham to Schurmeier re: mission objectives for Ranger Block IV. <i>2-697 del</i>	"

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1581	IOM from Schurmeier to Dist., Jan. 2, 1963, Sub: Ranger Reprogramming Guidelines	Files
1582	NASA memo dated Jan. 17, 1963 from O.W. Nicks to Mr. Jack Keany, Sub.: Rocket Launches to the Moon	"
1583	IOM Feb. 4, 1963 from R.V. Meghreblian to H.M. Schurmeier, Subject: High Resolution Facsimile Capsule Development	"
1584	Ranger "Tuesday-Thursday" Project Meeting Minutes 2/14/63 to 12/3/63.	"
1585	IOM Feb. 21, 1963 from Ranger Planning Office to Section 312 Engineers WX Subject: Block 3-N Mission Philosophy	"
1586	NASA Memo from N.W. Cunningham to John W. Rosenberry, Launch Vehicle & Propulsion, March 12, 1963, Subject: Information for Congress	"
1587	IOM dated 3-28-63 from Budd Love to Distribution, Subject: Oral Presentation of the Fairchild Stratos Corp. Mid-Term Report for the Phase IIA Ranger 6-9 Spacecraft Reliability Study.	"
1588	IOM dated 12-7-62, from Buddxx Love to Dist. Sub: Presentation of the Fairchild Stratos Corp. Mid-Term Technical Progress Summary Report for the Ranger 6-9 Spacecraft Reliability Study.	"
1589	TWX or Letter from Cortright to Robt. Rodney, Mar. 7, 1963 transferring funds to WOO for obligation to the JPL contract.	"
1590	Letter April 2, 1963 from H.E. Newell to Ar. A.R. Hibbs, regarding Hibbs' role as experimenter.	"
1591	<del>xxxx</del> IOM April 4, 1963, from B. Sparks to Technical Division Chiefs, Subject: Division Project Organization	"
1592	NASA memo April 25, 1963 from N.W. Cunningham to Ranger Program, OSS Review of April 25, 1963	"
1593	TWX dated Apr. 25, 1963 from Schurmeier to Jakobowski/Cunningham, re mission objectives.	"
1594	IOM dated April 29, 1963 from H.M. Schurmeier to Johnson, Rygh and McClure" Subject: IMPROVED COMMUNICATIONS FOR RANGER BLOCK 2.	"
1595	IOM dated 29 April 1963 from R. Heyser to R. Heacock, Subject: RCA Goldstone Ground Station Performance	"
1596	Letter April 30, 1963 from Cortright to Pickering refusing request for waiver to unclassify launching dates of Ranger, Surveyor and Mariner.	"

## SOURCE LIST #2

<u>No.</u>	<u>Ranger</u>	<u>Location</u>
1597	IOM 6 May 1963 from R.J. Parks to Distribution, Subject: Spacecraft Video Ground Data Processing. Policies and Organization Responsibilities	Files
1598	IOM May 13, 1963 from B.D. Love to Distribution, Subject: Ranger 6-9 Preliminary Reliability Estimate	"
1599	IOM May 13, 1963 from H.M. Schurmeier to M.S. Johnson/N.A. Renzetti, Subject: Design Review of DSIF and SFO Systems for Ranger Block 3	"
1600	IOM May 16, 1963 from J.W. Bott to W. Scott, Subject: Status Report - Ranger CC&S Block IV Contract at Nortronics, Palos Verdes Facility.	"
1601a	EPD 156, 14 May 1963, TV SUBSYSTEM REQUIREMENTS FOR RANGER BLOCK III,	"
1601b	EPD 156, Rev. 1, 14 Aug. 1963 Amendment 1 22 April 1964	"
1601c	EPD 156- Addendum 2, Rev. 1, 20 Sept. 1964	"
1602	IOM 5/17/63 from J.F. Lucca [Northrop] / C.D. Fredrickson, to G.E. Sweetnam, Subject: Reliability and Weight Considerations for Solar Panel-Battery and All Battery Power Source.	"
1603a	Ranger Quarterly Review Minutes, JPL May 21, 1963 - AGenda	"
1603b	" " " " - Minutes	"
1604	Proposed memo dated May 27, 1963 by H.M. Schurmeier to All Concerned: Subject: JPL-NSL Relationship for Ranger Block 5	"
1605	IOM May 28, 1963 from J.D. Burke to H.M. Schurmeier and Ranger Distribution, Subject: Recommended Block 5 Capsule Survival Sphere Design	"
1605a	IOM May 28, 1963 from Schurmeier to Dist., Subject: Ranger Block V Preliminary PDP Draft transmittal	"
1606b	Ranger Block V PDP draft	"
1607 a-h	Memo 5/7/63 from J.J. Nielsen to Schurmeier, Subject: Minutes of Ranger TV Subsystem Quarterly Review, Princeton, N.J., May 2, 1963	"
1608	IOM May 24, 1963 from E. Rechtin to R.J. Parks, Subject: Effect on DSIF of Possible Ranger Rescheduling.	"
1609	IOM from J. Small to H. Schurmeier, 6/7/63, Subject: Comments on Ranger Block V	"
1610	IOM 6/10/63 from G. Despaigne/A Metzger to C. Campen, Subject: Schedule Status of Ranger Block IV Gamma-Ray Spectrometer	"

# SOURCE LIST #3

## Ranger

<u>Nol</u>	<u>Item</u>	<u>Location</u>
1611	Tech. Memo. 312-321 dated June 13, 1963 from Wxx D.W. K Curkendall to Distribution, Subject: A Model for the Determination of the Optimal Camera Turn-on time.	Files
1612	Ranger Contingency Plans, dated 6/12/63	"
1613	IOM 6/14/63 from L. Piasecki to H. Schurmeier, Subject: Comments on Block 5 PDP and Capsule Survival Sphere Design, May 28, 1963	"
1614	IOM 6/14/63 from F. Felberg to Distribution, Subject: Division Policy Relating to Material Review Board Requirements for Ranger and Mariner C	"
1615	IOM 6/18/63 from Ranger Spacecraft Systems Manager to Ranger Personnel Subject: Ranger 6 Schedule	"
1616	IOM 6/18/63 from A.E. Wolfe to M. Mesnard, Crabtree, Berger and Alcorn Subject: Flight Qualification Test Requirement	"
1617	Letter dated 21 June 1963 from D.L. Vivrette, Director Contracts Sectbn of Northrop Space Labs, to C.C. Cook, Subject: Contract No. 950591, Task A and B Reliability Studies, Delivery Schedules.	"
1618	IOM March 22, 1963 from A.W. Vogan to Distribution, Subject: Atlas Configuration For Ranger Block IV- Mariner C	"
1619	IOM 4-10-63 from A. Briglio Jr./B.W. Schmitz, to H.M. Schurmeier, Subject: Increased Midcourse Capability for Block IV Ranger Spacecraft	"
1620	IOM 4/25/63 from C.B. Guderian to Distribution, Subject: Correction of Minutes to Meeting Ranger Block IV Midcourse Motor Increased Capability.	"
1621	IOM May 8, 1963 from T. Vrebalovich to D. Alcorn, Subject: Turn-on Sequence for Gamma-Ray Spectrometer on Ranger Block IV as discussed in "Command Meeting" on April 29, 1963.	"
1622	IOM May 24, 1963 from L.M. Bronstein to P.H. Feitis, Subject: Ranger Block IV Trajectory Specification	"
1623	Letters regarding quality control on Ranger TV Subsystem at RCA	"
1623a	Letter from J. Curtis, JPL Q.A. dated June 13, 1963 to C.S. Peterson of RCA, Subject: Ranger Integration Assembly Area	"
1623b	Letter from Mx J. Curtis, JPL Q.A. June 13, 1963, to C.S. Peterson of RCA, Subject: Unacceptable Practices on JPL Ranger TV Subsystem Equipment IOM	"
1623c	<del>xxxxxx</del> from E.H. Piercy, JPL Q.A., to Ken Tate, June 10, 1963 regarding inspection of capacitors at RCA	"
1623d	IOM from J. Curtis to L.K. Tate 6-8-63, Subject: Summary of Surveillance Trip by K. Tate and J. Frey.	"



# SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1624	NSL Report 63-134, July 1963, Final Report, NSL Ranger Phase 1 Program, Tasks C(1), C(2), and C(3)	Files
1625	IOM July 11, 1963 from R.G. Piereson to C.C. Kirsten, Subject: Ranger Command Subsystem Failures, Ranger Block II	"
1626	IOM 12 July 1963 from J.N. James/H.M. Schurmeier, to Executive Council, Subject: Requests for Specific Action to Aid in Accomplishing Projects	"
1627	IOM 7-15063 from W. Schimandle to F. Felberg/M. Comuntzis, Subject: Ranger Block IV Vehicle Review Board	"
1628	IOM 7-16 1963 from G. Nichols to Blk V-Div. Proj. Engineers, Subject: Summary of Blk V. Engineering Meeting, 3 July 1963	"
1629	IOM 7/18/63 from H.M. Schurmeier to E. Rechtin, Subject: Ranger Block III Support and Priority within DSIF	"
1630	TWX from V.W. Howard, Northrop, to K. Coon, JPL, Subject: Contract 950591, suggested changes to EPD 154.	"
1631	IOM July 19, 1963 from H.M. Schurmeier to Ranger Dist. List D, Subject: Ranger Block IV.	"
1632	TWX 19 July 1963 from K. Coon, JPL to V.W. Howard, Northrop, Subject: Contract 95091, EPD No. 154.	"
1633	TWX 23 July 1963 from R.W. Connor, Northrop, to K. Coon, Subject: Contract 950591, suggested changes to EPD-154, Part 2.	"
1634	IOM 7/26/63 from J.P. Marsh to T.W. Candee, Subject: Ranger Program Problems at STL.	"
1635	IOM July 26, 1963 from Schurmeier to Technical Div. Chiefs Subject: Ranger Block V FY 1964 Project Budgets.	"
1636	NASA memo dated July 15, 1963 from N.W. Cunningham to E.M. Cortright Subject: Change of Block Designation for Ranger Program	"
1637	Letter, Aug. 2, 1963 from N.W. Cunningham to H. Schurmeier, regarding discussion of July 31.	"
1638a	Rough Draft of IOM 5 Aug. 1963 from Meghreblian to Schurmeier, Subject: Review of Experiments Proposed for Ranger Block V.	"
1638b	Attachment to above, "Results of Ranger Block V Scientific Experiment Proposal," Aug. 5, 1963	"
1639	IOM dated 8/7/63 from R.J. Parks to E. Rechtin, Sub: Attached Draft of Letter to OTDA.	"

## SOURCE LIST #2

Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1640	Letter Aug. 9, 1963 from H.M. Schurmeier to N.W. Cunningham, Subject: Ranger Block 5 Experiment Recommendations	Files
1641	Letter, Aug. 9, 1963 from H.M. Schurmeier to N.W. Cunningham giving a brief general summary of experiment proposals for Block 5.	"
1642 a-r	IOM 8/8/63 from J.J. Nielsen to D.H. Kindt, Subject: Minutes of Ranger" TV Subsystem Experimenters Meeting and Quarterly Review, Princeton, N.J., July 31, and Aug. 1, 1963.	"
1643	Letter Aug. 12, 1963 from R.J. Pakke to V.W. Howard, Northrop, enclosing copy of management change in Block V, at JPL.	"
1644	Document 12 Aug. 1963 entitled, STATEMENT OF WORK, SEISMOMETER CAPSULE" DESIGN STUDY [Prelim. Draft, see EPD-176.]	"
1645	IOM 16 Aug. 1963 from W.G. Leflang to D.H. Kindt, Subject: Recommendations on Recent RCA Problems	"
1646	IOM Aug. 21, 1963 from W.H. Pickering to Distribution, Subject: Request for Appointment of a Source Evaluation Board for the Spacecraft TV Ground Data Handling System.	"
1647	Ranger JPL/NASA Quarterly Review held at JPL Aug. 13, 1963	"
1648	IOM 22 Aug. 1963 from M. Goble, Test Director, Ranger Block 3 RA-6 to Dist., Subject: Test Phase Report 1, Ranger Block 3 RA-6 Space- craft Assembly Operations	"
1649	Document entitled RANGER BLOCK V LAUNCH SCHEDULE 8-26-63	"
1650	IOM Aug. 26, 1963 from J.D. Burke to K.C. Coon, Subj: NSL Phase I Report "	"
1651a	IOM Aug. 28, 1963 from J.D. Burke to G. Robillard, Subject: Mission Analysis for Ranger Block 5	"
1652b	Attachment to above entitled PROPOSED RANGER BLOCK 5 MISSION OBJECTIVES"	"
1651c	Planning Chart, Future Ranger Mission, R.G. Brereton 2/13/63	"
1651d	Ranger Block 5 Missions, 2/11/63, Jim Burke	"
1652	IOM Sept. 3 from W.H. Pickering to Senior Staff, Source Evaluation Board, Subject: Appointment of Source Evaluation Board for Spacecraft TV Ground Data Handling System.	"
1653	IOM Sept. 5, 1963 from E. Rechtin to R.J. Parks, Subject: <del>XX</del> Effect " on DSIF of Possible Ranger <del>Scheduling</del> Rescheduling.	"
1654	IOM Sept. 5, 1963 from E. Rechtin to Schurmeier & Robillard, Subject: " Meeting with OTD in Washington 29 Aug. 1963.	"
1655	Letter Sept. 18, 1963 from N.W. Cunningham to H.M. Schurmeier, concurring with Bud's recommendation to use <del>PERT</del> <i>milestone</i> / <i>has</i> <i>chart instead of PERT.</i>	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
1656	IOM from E.M. Cortright 9/23/63 to Directors of Ames, JPL, Goddard Files and Langley, Subject/ Office of Space Sciences Project Review [Ranger scheduled for Nov. 7]	
1657a	Letter SEpt. 26, 1963 from G. Robillard, Project Manager Ranger Block V, to Cunningham enclosing Block V Status Report.	"
1657b	Enclosure to above entitled RANGER BLOCK V STATUS REPORT AS OF 17 SEPTEMBER 1963.	
1658	IOM 27 Sept. 1963 from J.B. Berger to Distribution, Subject: SAF Activities @- RA-6 Tear-Down Period	"
1659	IOM 9/27/63 from J.B. Berger to A.E. Wolfe, Subject: SAF Activities RA-6 Tear-down.	"
1660	Document dated October 1963, entitled PRESENT STATUS [RA-6 to RA-9]	"
1661a	IOM October 3, 1963 from R.B. Harker to A.E. Wolfe, Subject: Dangerous Transients produced by @xx Power OSE	"
1661b	IOM 13 Sept. 1963 from Max Goble to Crabtree/,cGee, Subject: Test Phase Report 2 [Referenced in 1661a]	"
1662a	IOM from Geof. Robillard Oct. 7, 1963 to Distribution, Subject: Draft Version of PROJECT POLICY AND REQUIREMENTS FOR RANGER BLOCK V	"
1662b	Enclosure to above Dated 9/13/63, Rev. 1, PROJECT POLICY & REQUIREMENTS RANGER BLOCK V	"
1663	Mission Analysis - 3 Memo Oct. 11, 1963, Ranger Block III TV System Control, from R.Moyer/L.M. Bronstein to P. Rygh	"
1664	Addendum to above #1 December 11, 1963	"
1665	IOM from H.M. Schurmeier dated 10/15/63 to W.H. Pickering, Subject: Status of Ranged Block III.	"
1666	TWX dated 10-18-63 from B.P. Miller, RCA, to Schurmeier/Kindt/Yarnes Subject: Contract 950137, Utilization of the PTM of the Ranger TV Subsystem for Special RF Ex Dropout Tests.	"
1667	TWX dated Oct. 24, 1963 from Schurmeier to Dr. Himmel of Lewis giving revised launch schedules for RA-6 thru RA-9.	"
1668	TWX dated Oct. 22, 1963 from H. Newell to Lewis Research, re Agena Program Cahnages at AMR.	"
1669	NASA Memo Oct. 29, 1963 from O.W. Nicks to Director of OSS, Subject Ex Evaluation of Contractor Performance.	"
1670a	TWX IOM Oct. 28, 1963 from Schurmeier to Cunningham and Himmel, confirming agenda for Ranger Project Review of Nov. 7, in Washington.	"
	1670b is the Agenda, and 1670 c is the Schedule.	

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<u>No.</u>	<u>Item</u>	<u>Location</u>
1671	IOM's dated July 12, 1963 thru Dec. 27, 1963 from R.L. Crabtree to J.F. McGee/A.E. Wolfe, Subject: RANGER BLOCK 3 STATUS	Files
1672 q-d	Minutes of Seventh Ranger Quarterly Review, Hightstown, N.J., Oct. 24, 1963 [IOM From Julian Nielsen to Don Kindt, Oct. 28, 1963]	"
1673 q-d	Letter from B. Kreuzer to R.J. Parks, Nov. 6, 1963 re. Quarterly Review	"
1674	RCA Document AED R-2172 under Contract No. 950137, RANGER TV SUBSYSTEM CAMERA-OPTIMIZATION PLAN, Nov. 1, 1963	"
1675	XEM NASA memo from O.W. Nicks to Newell and Cortright, Subject: Major current problems in SL, Nov. 1963, dated November 5, 1963	"
1676	RANGER BLOCK V BIWEEKLY STATUS REPORT, 30 Sept. 1963	"
1677	RANGER BLOCK V BIWEEKLY STATUS REPORT, 31 Oct. 1963	"
1678	RANGER BLOCK V BIWEEKLY STATUS REPORT, 14 Nov. 1963	"
1679	RANGER BLOCK V BIWEEKLY STATUS REPORT, 22 Nov. 1963	"
1680	IOM 11-26-63 from M.S. Johnson to W.E. Giberson, Schurmeier, James, Subject: Revised Charter of the Ranger, Mariner, Surveyor and Fire Tracking, Telemetry and Communications Panel	"
1681	Letter from S.C. Himmel, Manager, Agena Project, LeRC, to Mr. Geof. Robillard, Subject: Advisory Panels for Ranger Block V.	"
1682	Preliminary Draft of RANGER BLOCK V LAUNCH CONSTRAINTS PLANNING DOCUMENT E. Travers, transmitted by IOM dated Dec. 5, 1963 from Travers/J.S. Reyl, document has no date.	"
1683	IOM dated Dec. 6, 1963 from L.M. Bronstein to P. Rygh, Subject: Ranger 6 Mission Analysis-4: TV turn-off if DSIF-SFOF communications fail.	"
1684	IOM from K.C. Coon to G. Robillard, 12-13-63, Subject: Telephone Conversation with Dr. Himmel, LeRC, re: Block V Cancellation	"
1685	TWX 12-13-63, from Homer Newell to Dr. Pickering/Paul Ross, stopping effort on Block V.	"
1686	IOM Dec. 18, 1963 from Max Goble to Crabtree/McGee, Subject: Phase Report 6, Oct. 7 thru. Dec. 18, 1963.	"
1687	Letter from H.M. Schurmeier, Dec. 19, 1963 to N.W. Cunningham, advising of shipment of RA-6.	"
1688 a	NASA memo to Seamans from Newell attaching 25th Ranger Program bi-weekly Status Report, Dec. 23, 1963	"
1688b	NASA memo from Cunningham to Seamans dated <del>Dec</del> Dec ?, <del>1963</del> 1963, Subject: Status Report No. 25, Ranger Program	"

## SOURCE LIST #2

<u>No.</u>	<u>Item</u>	<u>Location</u>
1689	IOM 2/26/62 from B.T. Morris to Pickering and Sparks, Subject: <del>mx</del> Ranger RA-3 Failure Investigation and Analysis Summary	Files
1690	Letter May 15, 1962 from N.W. Cunningham to Jim Burke, confirming that no capsule bombs will fly on RA-5. <i>Dep</i>	"
1691	IOM from B.T. Morris to J.D. Burke, Subject: Agena B Turn Around-- Recommended change. 5/28/62	"
1692	Letter SEpt. 28, 1962 from C.I. Cummings to Homer E. Newell, Subject: Status of Ranger A5 Spacecraft decontamination.	"
1693	IOM 17 Sept. 1962 from A.E. Wolfe to Distribution, Subject: Thermal Sterilization/Flight Acceptance Test Sequence and Ginformal Coating of Ranger Follow-on Hardware.	"
1694	IOM 9/18/62 from A.P. Bowman to A.E. Wolfe, Subject: Test Status of Ranger Assemblies sterilized after environmental flight acceptance.	"
1695	IOM Nov. 27, 1962 from J.D. Burke to Ranger Overall Dist. List, Subject: Schedule for Ranger 6.	"
1696	IOM Nov. 7, 1962 from A.E. Wolfe to Distribution, Subject: DEV Testing	"
1697	Letter Dec. 6, 1962 from C.I. Cummings to O.W. Nicks, Subject: Costs and Consequences of LUnar <del>Spacecraft</del> Spacecraft Sterilization.	"
1698	<del>FWO Dec 18, 1962 from</del> Document dated 12/4/62 entitled, GUIDELINES FOR RANGER PROJECT PROGRAMMING (Preliminary)	"
1699	IOM from J.D. Burke, Dec. 20, 1962 to H.M. Schurmeier, Subject: Ranger Jobs outstanding as of 12/19/62.	"
1700	Document <del>date</del> from J.D. Burke, dated 12-18-62 entitled RECOMMENDATIONS <del>RE</del> ON RANGER.	"
1701	RCA TV Contract Summary, Blk III, 950137, from 14 Aug. 1961 to modification <del>xxx</del> #44, April 9, 1964.	"
1702a	Contract Transmittal 950137 8-14-61 with RCA	"
1702b	Letter Contract <del>is</del> 950137, Aug. 14, 1961	"
1702c	Mod. 5 to Letter Contract 950137, which is the definitive contract, [should be dated 18 April 1962]	"
1702d	JPL Spec 30880, 11 Oct. <del>1962</del> 1961 which is Exhibit A to Mod. 5	"
1702e	Exhibit B, Technical Presentation 25 Aug. 1961, which is to Mod. 5 of the definitive contract.	"
1702f <del>z</del>	Mod 20 to 950137 dated 28 Dec. 1962 which provides for subsystem study and Reliability Analysis through revision of Reliability Spec.	"

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## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1702g	Mod. 23 to Contract 950137, Jan. 25, 1963, adds Phase III to scope of work	Files
1702h	Mod 26 to Contract 950137, Mar. 26, 1963, calls for modification of Flight Models 1, 3 and 4.	"
1702i	Mod. 40 to Contract 950137, Feb. 19, 1964 , Design Revision and Hardware Modification to PTM and Flight Units III-2, III-3 and III-4 Ranger TV Subsystems	"
1703	JPL Spec. FR3-4-110-B, 22 April 1964, Functional Specification, Ranger Block III Flight Equipment Television Subsystem.	"
1704 a+b	IOM 14 July 1961 from Charles A. Hamler to File 2647, Subject: High Resolution T.V. Camera Mission, Contractor Selection	"
		"
1705	Letter June 26, 1961 from Seamans to Pickering acknowledging Cummings' letter of May 25, 1961 [2-1119] re sterilization.	Files
1706	Letter Nov. 3, 1961 from R.P. Young [Exec. Asst to Adm.] to Mr Webb re cancellation of Ranger	"
1707	IOM 7/29/60 from W.R. Woods to Distribution, Subject: Test Requirements for Ranger Proof Test Model	"
1708	IOM Nov. 13, 1961 from Burke to Distribution, Subject: JPL Functional Management Structure for Ranger Follow-on (RCA TV Subsystem)	"
1709	Letter Jan. 15, 1962 from Cummings to Seamans, Subject: Recent changes in Status of Ranger A3 Biological Decontamination.	"
1710	Rough Draft dated 4/19/62 of RANGER 10-15 MISSION STUDY	"
1711	Minutes of Ranger TV System meeting of July <del>for</del> 7, 1961	"
1712	IOM Aug. 10, 1961 from G.E. Nichols Jr to J.D. Burke re NASA-W00 approval of RCA Letter Contract	"
1713	IOM 8-17-61 from T.W. Candee to C.I. Cummings, Subject: Letter Contract No. 950137, Ranger Follow-On TV Mission	"
1714	IOM 12/21/61 from D. Schienle to Dist. Subject: RA-5 Status Report to NASA on Jan. 12, 1962.	"
1715	IOM Dec. 21, 1961 from J.R. McKee to Schurmeier, Sub: Status of RA-2a	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
1716	IOM 8-1-62 from L. Meier to W. Downhower, Subject: Reliability Study Files 8x for Ranger 6 - 9.	
1717	Paper dated 1963 from H.M. Schurmeier entitled "Felberg's Law"	"
1718	IOM 6 May 1963 from J.B. Berger to A.E. Wolfe, Subject: Block-3 Spacecraft System Analysis as of 8xx 26 April 1963	"
1719	"Old Devil Moon," from <u>Newsweek</u> April 15, 1963 found in NEWS Clips dated April 17, 1970. Five theories of structure of moon's crust.	News Clip Files
1720	Ranger Weekly Activity Reports from Cunningham to Nicks starting April 17, 1964 with Report 8x No. 1.	Files
1721	NASA Memo for Distribution from N.W. Cunningham, April 30, 1964 Subject: RA-7 Launch Operations.	"
1722	NASA memo 8xx to Distribution from <sup>M</sup> R. Gill, Staff Scientist, Planetology" May 11, 1964, Subject: Ranger B Mission Operations Planning Meeting	
1723	NASA memo to Cunningham from <sup>M</sup> R. Gill, May 11, 1964, Subject: RA-7 Tests " <del>meeting</del> at RCA during period of April 21-28, 1964.	"
1724	NASA Memo to SL/Manager from B.C. Lam, May 11, 1964, Subject: Ranger PTM Mission Tests, Daily Activity Report (30 April - 4 May 1964)	"
1725	NASA memo to Cunningham from Jakobowski, May 14, 1964, Subject: Trip Report to JPL 13-18 May 1964,	"
1726	NASA Memo to Distribution from Cunningham, May 15, 1964, Subject: Spacecraft Monitoring Activities at JPL and AMR.	"
1727	NASA memo to Distribution from H.E. Newell, May 25, 1964, Subject: NASA Buy-Off for Ranger 7.	"
1728	NASA memo to Ranger Files, Oct. 13, 1964, <del>Subject</del> from Cunningham, Subject: Scientific <del>xxx</del> Publications [policy] Relating to Ranger VII Mission.	"
1729	NASA Memo to Files from W. Jakobowski, Nov. 3, 1964, Subject: Ranger Scheduling.	"
1730	NASA memo to Cunningham from M.R. Gill, Ranger Program Scientist, June 10, 1965, subject: Ranger Experimenters' Data REduction and Analysis Programs for FY 1966.	"
1731	NASA memo to Assoc. Admin. for Space Science & Applications, from Director, Lunar and Planetary Programs [O.W. Nicks] 13 July 1965, Subject: Performance Evaluation of the JPL.	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
1732	IOM 12/9/63 from H.J. Parks to Dr. Pickering, Subject: Authority for Ranger Block V	File
1733	EPD-91, 5 July 1962, Space Flight Operations Memorandum, Ranger IV	"
1734	Various letters dated late 1961 involving NASA relationship with the scientific community.	"
1735	IOM, 7/25/62, from R. Hastrup to G. Hobby, Subject: Considerations in the Establishment of Lunar Spacecraft Sterilization Requirements	"
1736a	Document entitled, "Information Requested by NASA in Regard to Ranger Block III Missions [Complete bibliog. on RA science publications] about Nov. 1967.	"
1736b	Attachment I to above, entitled, "Publications Using Ranger Data"	"
1736c	Addendum to "Publications Using Ranger Data, Ranger Experimenters"	"
1736d	Letter May 18, 1966 from H.M. Schurmeier to N.W. Cunningham giving a list of published Ranger Articles.	"
1737	Handwritten document from Schurmeier files entitled, "RCA TV Subsystem Contract," [July 61 est., 6M for 4 shots] <i>Lates about Jan, 1963</i>	"
1738	JPL Spec. REL-75010-SRS, 28 Oct. 1963, Spacecraft System Requirements Specification, Ranger Block V.	"
1739	Walter Sullivan, "Moon 'Race' Held to Ignore Germs--Scientist says U.S. Relaxes Plan for Sterile Vehicles," <u>N.Y. Times</u> , Apr. 25, 1963.	"
1740	EPD 69, SPACE FLIGHT OPERATIONS MEMORANDUM, RANGER II, 5 Feb. 1962	" <i>file</i>
1741	<u>Ranger TV Subsystem</u> , presentation by AED, RCA, Jan. 17, 1963	<i>shelf</i>
1742	Technical Report No. <del>32-882</del> 32-877, <u>Digital Video-Data Handling</u> , R. Nathan, File Jan. 5, 1966	File
1743	Technical Report 32-1028, <u>Digital Computer Processing of X-Ray Photographs</u> , R.H. Selzer, Nov. 15, 1966	"
1744	Lab-Oratory, August 1964	"
1745	Proceedings before the Committee on Science and Astronautics, U.S. House of Reps. 88th Congress, First Session, <u>Panel on Science and Technology, Fifth Meeting</u> , Jan. 22 and 23, 1963.	"



# SOURCE LIST #2

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## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1746	Form letter [to Experimenters] dated Mar. 29, 1963 from H.E. NEWELL asking them to propose experiments to be considered for the 1965 series of Ranger flights.	Files
1747	Form letter [to Experimenters] dated Mar. 29, 1963 from H.E. Newell to those who had lost out on Block III.	"
1748	Form letter [to Experimenters] dated April 5, 1963 from N.W. Cunningham giving more detailed information for the preparation of experiment proposal.	"
1749	NASA document dated 3/13/63 entitled PROGRAM/PROJECT DATA SUMMARY giving Objectives of all the Blocks of Rangers and also NASA and JPL responsibilities.	"
1750 A-Z	Booster/spacecraft integration documents for all missions, from 1960 to 1964.	Shelf
1751	Launch Vehicle/Spacecraft Failure Report 2/4/64	Files
1752	H.E. Newell, Assoc. Admin. for Space Science and Applications before the Comm. on Sciences and Astronautics, House of Reps, PRACTICAL RESULTS FROM THE NASA SPACE SCIENCE & APPLICATIONS PROGRAM, 25 Feb. 1964 [38 pages]	"
1753	Letter from Homer E. Newell, Feb. 14, 1964 to Hon. Joseph E. Karth responding to nine questions asked in his letter of 30 Jan. 1964.	"
1754	Reports of OSSA Staff Meetings: from Jan. 30, 1964 to May 27, 1965	"
1755	Transition Memorandum prepared by T. Keith Glenman, Jan. 1961	"
1756	Aeronutronic Div. of Ford Motor Co., LUNAR CAPSULE SYSTEM STUDIES, FINAL REPORT, VACSIMILE AND ACCELEROMETER SYSTEMS INTEGRATION STUDY, Task I of JPL Contract 950267, 20 July <del>1962</del> 1962, Publication No. U-1765, part 1 of 3.	Shelf
1757	Aeronutronic Division of Ford Motor Co., MASTER PROGRAM PLAN, LUNAR SURFACE PHOTORECONNAISSANCE CAPSULE (LSPC), VOL. I, <del>Final</del> Final Report, Facsimile and Accelerometer Systems Integration Study, Task I of JPL Contract 950267, Publication No. U-1765, Part 2 of 3, 20 July 1962	"
1758	Aeronutronic Div. of Ford Motor Co., SPACE AND ELECTRONIC PROGRAMS, Final Technical Report, Lunar Rough Landing Capsule Development Program, 20 FEB. 1963, Publication No. U-2007 under contract N-21453 (under NASA Contrast NAS7-100)	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
✓ 1759	Management Memos and Staff Meetings of OSS, from Nov. 1961 to to Oct. 30, 1963. <i>July 1965</i>	Files
✓ 1760	Management Memos and Staff Meetings of OSS, from Jan. 1959 to Nov. 1961.	"
1761	Space Science Steering Committee Summary Minutes, 27 Aug. 1962	"
1762	" " " " " " 10 Sept. 1962	"
1763	" " " " " " Feb. 18, 1963	"
1764	" " " " " " 13 Mar. 1963	"
1765	" " " " " " 18 March 1963	"
1766	" " " " " " 21 Mar. 1963	"
1767	" " " " " " 25 Mar. 1963	"
1768	" " " " " " 15 Apr. 1963	"
1769	" " " " " " 3 Sept. 1963	"
1770	" " " " " " 14 Oct. 1963	"
1771	Planetology Subcommittee of the Space Sciences Steering Committee (Meeting No. 3-63) 5 and 6 March 1963	"
1772	Planetology Subcommittee of the Space Sciences Steering Committee (Meeting No. 4-63) 24 and 25 June 1963	"
1773	Planetology Subcommittee of the Space Science Steering Committee (Meeting No. 1-65) 26-28 Oct. 1964	"
1774	OSSA Administ. and Management Practices and Organ., 1963 <i>OSS Case for reorg. Contrailt recommendations of 25 April, 1963.</i>	"
1775	IOM from R.J. Parks to Pickering, July 24, 1963, Subject: Ranger Block V Management Policy	"

# SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Title</u>	<u>Location</u>
1776	EPD No. 154, <u>Project Description, Spacecraft System Contract, Ranger Block V, 6 May 1963</u>	Files
1777	EPD No. 154, Rev. 1, <u>Project Description, Spacecraft System Contract, Ranger Block V, 23 Oct. 1963</u>	"
1778	EPD No. 176, <u>Requirements for a Ranger Block V Lunar Rough Landing Capsule</u> 28 August 1963	"
1779	EPD-182, <u>Ranger Block V, Launch Vehicle Requirements, 2 Oct. 1963</u>	"
1780	Memo for T. Keith Glennan, thru Abe Silverstein, by H.E. Newell, 6 Jan. 1959, Subject: Progress Report for the Space Science Area	"
1781	Document dated 27 Jan. 1959 entitled THE UNITED STATES NATIONAL PROGRAM IN SPACE SCIENCE [H. Newell, no firm lunar exploration is outlined]	"
1782	Letter from H.E. Newell, Jan. 23, 1959 to Mr. Edw L. Weisl, Special Counsel, Preparedness Investigating Subcommittee, U.S. Senate.	"
1783	Memo for the Administrator by A.F. Siepert, Feb. 11, 1959, Subject: Budget Bureau discussion on contractor relationships	"
1784	Letter from H.L. Dryden, Deputy Admin, of NASA to Dr. Pickering regarding publication and distribution of <del>xx</del> scientific data obtained through the use of space vehicles.	"
1785a	Memo to M.W. Rosen from H.E. Newell Jr. 20 Feb. 1959, Subject: Tentative Project VEGA Space Sciences Objectives	"
1785b	Enclosure to above, dated Feb. 19, 1959, entitled NOTES, <del>RENTATIVE</del> OBJECTIVES FOR PROJECT VEGA	"
1786	Memo to Dr. Dryden, Dr. Silverstein, & Mr. <del>Gut</del> Gleason, from T.K. Glennan dated 11 Mar. 1959 re. Glennan's call from Roy Johnson discussing three items.	"
1787	Memo to Dr. Silverstein from T. Keith Glennan, 2 March 1959, regarding just putting "United States" on satellite vehicles, and not NASA	"
1788	Notes on Meeting on Vehicle Program Status, April 17, 1959	"
1789	Memo for Director of Space Flight Development, 28 May, 1959, from T.Keith Glennan, Subj: Operational Framework of JPL Responsibilities for the Vega Vehicle	"
1790	Notes on Meeting on Center Roles and Review of 1961 Budget, Sept. 19, 1959	"
1791	Memo for Dr. Glennan 23 Sept. 1959 from W.L. Hjernevik, Subject: Budget and Program Relationships with JPL.	"
1792	Letter, 27 July 1960, from T.K. Glennan to Dr. Pickering regarding NASA-JPL relationships	"

# SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1793	"Manned Lunar Landing," SCIENCE, 19 April 1963, Vol. 140, No. 3564.	Files
1794 a + b	Dr. Alfred Wegener, <u>The Origin of the Lunar Craters</u> (Die Entstehung der Mondkrater), 1921, Friedr. Vieweg & Son, Translated by the Center for Foreign Technology, Pasadena, Calif, Oct. 24, 1969	Files
1795	Northrop Space Labs Document NSL 63-147, RANGER BLOCK V PROGRAM REVIEW, July 25, 1963.	"
1796	Northrop Space Labs Document NSL 63-161, [BLOCK V] RANGER PAYLOAD DELIVERY SUBSYSTEM (PDS) STUDY, Sept. 1963	"
1797	Document, no date, RANGER VII, A NEW SPACE INSTRUMENT, by R.G. Forney, D.H. Kindt, W.E. Kirhofer, H.M. Schurmeier, and A.E. Wolfe	"
1798	JPL Document, no date, THE RANGER VII MISSION, by H.M. Schurmeier, R.L. Heacock, and B.P. Miller of RCA.	"
1799	Wesley S. Griswold, "Ranger 6, can it beat the jinx?" <sup>Popular</sup> SCIENCE, Jan. 1964"	"
1800	NASA Document, Jan. 1964, INFORMATION PLAN, RANGER A	"
1801	JPL IOM Jan. 3, 1964 from Brooks T. Morris to H.M. Schurmeier, Subject: Reliability of Launch Vehicles for Ranger Block III missions.	"
1802	TWX from O.W. Nicks to Earl Sample dated Jan. 7, 1964, Subject: Statement of work - Northrop Letter Contract NAS7-269.	"
1803	IOM 1/15/64 from R.C. Heyser to R.D. Williams, Subject: RA-6 TV Subsystem Launch Commitment	"
1804	Letter Jan. 20, 1964 from H.M. Schurmeier to Mr. Ray Hogan of RCA expressing concern over coming launch of RA-6 with the TV subsystem.	"
1805	Letter 21 Jan. 1964 from W.H. Pickering to Abe Silverstein expressing concern over the Atlas-Agena launch vehicle's reliability .	"
1806	TWX dated Jan. 23, 1964 from R.Hogan to H.M. Schurmeier stating that the TV s/s for Ranger 6 is in a flight-ready condition.	"
1807	Letter Jan. 24, 1964 from Abe Silverstein to Dr. Pickering giving assurances in the matter of Atlas-Agena reliability for forthcoming Ranger flights.	"
1808	IOM Jan. 27, 1964 from Schurmeier/Parks to all Lab Personnel, Subject: Ranger A Flight Activities	"

# SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1809	IOM from C.J. Bennett to H.M. Schurmeier, 9/23/63 Subject: Procurement Responsibility Transfer, RCA-AED TV Subsystem Contract 950137	Files
1810	Letter Feb. 2, 1964 from "Torre Bert", Turin, to Schurmeier, enclosing TV patterns of Ranger 6 received at their Center.	"
1811	NASA Announcement dated Feb. 3, 1964, Subject: Establishment of the Ranger VI Review Board.	"
1812	<del>XXXXXXXXXXXX</del> NASA memo dated Feb. 3, 1964 from Earl D. Hilburn to Dangle, Jakobowski, LeGow and Smith, Subject: Ranger VI Review Board	"
1813	Letter, Feb. 5, 1964 from George P. Miller, Chairman of the Comm. on Science and Astronautics, House of Reps., to W.H. Pickering congratulating him on accomplishment of Ranger 6, despite failure to take pictures.	"
1814	Minutes of Ranger VI Postflight Analysis Presentation Meeting at JPL, 7 Feb. 1964	"
1815	JPL Document, PRELIMINARY SPACECRAFT OPERATIONS LETTER, RANGER VI dated 10 Feb. 1964.	"
1816	NASA NEWS REEEASE, Nasa News Conference, Mr. James E Webb, Admin. Feb. 11, 1964	"
1817	IOM Feb. 12, 1964 from H.M. Schurmeier to Senior Staff, Subject: Ranger Block III - RA-7 schedule	"
1818	Letter 2/12/64 from Dr. Pickering to George P. Miller, Chairman, Comm. on Science & Astronautics, House of Rep. replying to his letter of 2/5.	"
1819	Discreet letter (or TWX) to Dr. Himmel of Lewis REsearch confirming telecon of 2/11 cancelling presently scheduled RA-7 launch period.	"
1820	Letter Feb. 13, 1964 from Robt R. Gilruth, Director of Manned Spacecraft Center, expressing regrets of Ranger 6 cameras.lack of response.	"
1821	Letter Feb. 5, 1964 from George P. Miller to Dr. Newell, <del>gx</del> sending congrats for success of Ranger 6 despite cameras not working.	"
1822	Letter Feb. 14, 1964 from Dr. Newell to Dr. Pickering enclosing above letter assuring confidence in the lab.	"
1823	NASA Memo from Jakobowski to Newell and Cortright, Subject: Comments on Ranger Failure Review Board Presentation on Feb. 14. Cunningham	"
1824	NASA memo from <del>Jakobowski</del> to Newell and Cortright, Subject: Ranger VI Failure Report Presentation of Feb. 14.	"

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1825	Editorial Feb. 16, 1964 THE INDEPENDENT STAR-NEWS, Pasadena, "No Cloud Over JPL,"	Files
1826	TWX dated Feb. 17, 1964 from Cunningham to Schurmeier, cancelling launch of RA-7.	
1827a	IOM 24 Feb. 1964 from J.N. James to W.H. Pickering, subject: Projects and Project Management at JPL with the following 2 enclosures:	"
1827b	IOM 22 Feb. 1963 from J.N. James to Dr. Pickering, Subject: List of Paramount Problems in my Area.	"
1827c	IOM 12 July 1963 from James/Schurmeier to Executive Council, Subject: Requests for Specific Action to Aid in Accomplishing Projects.	"
1828	TWX Feb. 24, 1964 from H.E. Newell to Pickering, Tentatively approving a May launch for RA-7	"
1829	D. Letter Feb. 27, 1964 from Earl Hilburn, Deputy Assoc. Admin. for Industry Affairs, to Mr. Gilmore, Vice-Pres. for Business Affairs, Caltech, regarding improvements in management in JPL.	"
1830	IOM Feb. 27, 1964 from Schurmeier to Distribution, Subject: Organization for Special Efforts on TV Subsystem.	"
1831	IOM Mar. 2, 1964 from M.S. Johnson to Schurmeier, Subject: Transfer of Ranger SFO from Bldg. 125 to SFOF.	"
1832	IOM-3/2/64 from J. Collins, M. Comuntzis, W.J. Downhower, P. Goldsmith T. Hamilton, R. Harker, R. Heacock, J. Paulson and J. Scull, Subject: Activities of the Comm. of Section Chiefs Reviewing the Ranger 6 Flight.	"
1833	TWX Mar. 11, 1964 from H.M. Schurmeier to LeRC, Subject: New Ranger Schedule	"
1834	<del>km</del> IOM Mar. 12, 1964 from H.M. Schurmeier to Ranger Block III Dist., Subject: Revised Ranger Block III Project Guidelines.	"
1835	IOM Mar. 20, 1964 from D.H. Kindt to Distribution, Subject: Assignment of Ranger TV <del>smx</del> Subsystem Project Engineer Deputy.	"
1836	IOM Mar. 25, 1964 from H.M. Schurmeier to Dist., Subject: AED/JPL Failure Report System for the TV Subsystem	"
1837	Letter Mar. 26, 1964 from R.C. Seamans to Dr. Pickering, enclosing copy of Final Report of the Ranger <del>ex</del> 6 Review Board (not included)	"
1838	TWX Mar. 31, 1964 from Robt. Seamans to Beckman Instruments, copy to JPL, quoting letters sent to <del>SEN</del> G.P. Miller and <del>KMK</del> Sen. Miller. [Failure REview Boar	"
1839	IOM, 3-31-64 from R.T. Hayes to W.J. Downhower, Subject: Static Charge Buildup on Ranger VI	"
1840	Letter, 10 Mar. 1964 from R.E. Horner, NSL to Dr. Newell, submitting a proposal for fabrication, assembly, etc. of 4 Rangers	"

## SOURCE LIST #2

## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
1841	EPD 143, Rev. 2, CAPABILITIES AND PROCEDURES, FLIGHT OPERATIONS FACILITIES RANGER BLOCK III, 14 Jan. 1964.	<i>Shelf</i> Files
1842	NASA document, no date (approx. Mar. 1964) Memo from Nicks to Newell, Subject: Summary of Actions taken in Response to the detailed recommendations of the Ranger VI Review Board.	<i>File</i> "
1843	Rough draft of letter, never sent, from <del>Sam</del> Schurmeier to Webb, refutation of Hilburn report, dated 4/3/64.	"
1844	Draft of NASA memo dated 4/8/64 from O.W. Nicks to the Associate Admin. subject: Comments on Mr. Webb's letter to Congress regarding the Ranger Program	"
1845	Letter, April 17, 1964 from E.D. Hilburn to Arnold O. Beckman, enclosing transcript of Webb's conference of April 15.	"
1846	System Test and Operation Report, Ranger Block III, RA-6 Spacecraft, 4/20/64	<i>"Shelf"</i> Files
1847	Letter, Apr. 22, 1964 from Homer E. Newell to R.E. Horner of Northrop, re letter of Mar. 10, 1964.	"
1848	Document by Ken Coon dated 4/22/64 entitled RANGER BLOCK V	"
1849	Rough-draft of document by Pat Rygh, 4/22/64, entitled BLOCK III SFO/DSIF DESIGN REVIEW AND PROCEDURE REVISIONS.	"
1850	Document by H.M. Schurmeier, 4/22/64 regarding review of entire Ranger activities [new objectives, etc.]	"
1851	Letter, 23 April 1964 from R.E. Hogan, RCA to Bud Schurmeier, Subject: Ranger Camera Electronics Unit 038 Investigation.	"
1852	Document entitled ASTRONOMICAL OBSERVATIONS DURING FLIGHT OF RANGER VI, by J.J. Rennilson and C.F. Campen, April 24, 1964.	"
1853a	Space Daily, April 30, 1964, p. 171 PICKERING REFUTES WEBB	"
1853b	Space Daily, April 30, 1964, p. 172 SOME HILBURN RECOMMENDATIONS REJECTED	"
1854	<u>Technology</u> , May 4, 1964. " <i>Katch lectures Webb on Congress' Role.</i> " <u>Aviation Week &amp; Space</u>	"
1855	NASA Memo <del>xx</del> 6 May 1964 from Cortright to Nicks, Sub: Additional Steps Preparatory to Ranger 7 flight.	"
1856	NASA Memo 5/6/64 from Cunningham to Deputy Assoc. Admin for Space Science and Applications [SD] Subject: Ranger 7 Television Subsystem Redesign, Rework and Test at RCA.	"
1857	Editorial, <u>Missiles &amp; Rockets</u> , May 11, 1964, by William J. Coughlin, PRAISE FOR CAESAR.	"

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
1858 <sub>a</sub>	TWX, May 11, 1964 from W.H. Pickering to H.E. Newell, Subject: Ranger B Schedule.	Files
1858 <sub>b</sub>	Twx, May 12, 1964 from H.E. Newell to Dr. Pickering, slipping launch one month. [Answer to above twx]	"
1859	TWX, May 18, 1964 from Schurmeier to Cunningham, re meeting at JPL with NASA personnel on May 14, 1964.	"
1860	TWX, May 20, 1964 from Schurmeier to Cunningham, re meeting wt JPL with NASA personnel on May 18 and 19, 1964.	"
1861	IOM 20 May 1964 from R.L. Crabtree to J.F. McGee/A.E. Wolfe, Subject Television Full Power Operation in the AMR Explosive Safe Area for Ranger Block III Spacecraft [Test Plan]	"
1862	IOM 22 May 1964 from D.H. Kindt to Distribution, Subject: AED TV Subsystem Failure Reporting Procedure at JPL.	"
1863	TWX June 8, 1964 to Schurmeier from Hogan, RCA AED, Subject: RA-7 TV Subsystem"	"
1864	NASA Memo June 17, 1964 from E.D. Hilburn, Deputy Associate Administrator, to the Associate Administrator, Subject: "Buy-off" of Ranger 7 at JPL	"
1865	IOM 25 June 1964 from M.A. Piroumian to Dist. Subject: Presentation on Ranger Investigations concerning Launch to Injection Environments.	"
1866	IOM 8 July 1964 from Schurmeier to Dist. Subject: Minutes of Ranger Quarterly, Review held June 23, 1964	"
1867	IOM 10 July 1964 from G.P. Kautz to J.H. Gerpheide, Subj: JPD Task Team Effort at AED.	"
1868	IOM July 13, 1964 from B.T. Morris to H.J. Margará, Subject: Atlas and Atlas-Agena Reliability Statements by GD/A.	"
1869	Letter July 16, 1964 from R.C. SEamans Jr., Assoc. Admin., to Pickering, reviewing task order problem.	"
1870	IOM July 20, 1964 from B.T. Morris to Felberg, Parks and Rehtin, Subject: Remaining Risks to the Success of RA-7.	"
1871	EPD 143, CAPABILITIES AND PROCEDURES, SPACE FLIGHT OPERATIONS FACILITY, RANGER Shel BLOCK III, 20 July 1964	
1872 <sub>a</sub>	NASA memo July 22, 1964 from E.D. Hilburn to ASSoc. Admin. for Space Science and Applications, Subject: RANGER "Buy-Off" Board Meeting, Mx July 25.	Files
1872 <sub>b</sub>	NASA memo [same as above] Subject: Pickering letter to Newell July 16, on the subject of Ranger B success probability.	"
1873	IOM 23 July 1964 from <sup>w</sup> M. Johnson/E. Beran to Distribution, Subject: Ranger PTM High Voltage Test conducted on July 17, 1964	"



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## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
1874	United States Information Agency, REsearch and Reference Service Document R-107-64, FOREIGN MEDIA REACTION TO RANGER 7, Aug. 5, 1964	Files
1875	IOM 8-7-64 from D. Alcorn to Distribution, Subject: Ranger 7 Post-Flight Design Review	"
1876	Minutes of Ranger 7 Postflight Analysis, Meeting held at JPL 13 Aug. 64	"
1877	TWX from Schurmeier to Cunningham, regarding slippage for RA-8, dated Aug. 18, 1964	"
1878	TWX 8/25/64 from Earl D. Hilburn to Dr. Pickering regarding release of information via the mass media.	"
1879	Andrew T. Young, "Space Program and Earth-Based Astronomy," <u>Science</u> Vol. 145, 4 Sept. 1964	"
1880	IOM Sept. 9, 1964 from Schurmeier to Ranger Dist. Lists, Subject: Ranger RA-8 and RA-9 Schedule	"
1881	Memorandum dated 25 Sept. 1964 from Gerard P. Kuiper to Co-Experimenters" Ranger Project	"
1882	Letter, Oct. 5, 1964 from Schurmeier to Cunningham enclosing the follow:"	"
<del>1882b</del>	Enclosure, dated Oct. 5, 1964 to the above, which is a document describing the areas which <del>xxxxxx</del> JPL considers the Ranger Project unique or as "advancing the state of the art."	"
1883 a e	IOM 10-7-64 from J.H. Newman to D. Alcorn, Subject: Some <del>RE</del> Recommended" <del>Change</del> Ranger (Post Block III) Subsystem Design Changes.	"
1884	EPD 242, SPACE FLIGHT OPERATIONS MEMO, RANGER VII, 12 Oct. 1964	" <i>Shel</i>
1885	Minutes, Ranger Quarterly Review, Oct. <del>17</del> 16, 1964	" <i>File</i>
1886	Letter from Schurmeier Oct. 16, 1964 to Cunningham, Subject: Proposal for Rangers RA-11 and RA-12.	"
1887	"Interpretation of Ranger Photographs," <u>Science</u> , Vol. <del>184</del> 146, Oct. 23, 1964	"
1888	NASA Memo Oct. 28, 1964 from E.D. Hilburn, Deputy Assoc. Admin. to Deputy ASSoc. Assoc. Admin. for Industry Affairs, Subject: TEchnology Utilization Review and Analysis of Ranger -Block III	"
1889	TWX, Oct. 28, 1964 from Cunningham to Schurmeier advising that Ranger 9 " schedule is unchanged and the discontinuance of additional Rangers being reviewed.	"
1890	Letter, 11/3/64 from Schurmeier to Dr. Gerard P. Kuiper.	"

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## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
1891	NASA memo Nov. 9, 1964 from Robert C. Seamans Jr. Assoc, Admin. to Associate Administrator for Space Science and Applications, Subj: Testing Program for RA-8 and 9.	Files
1892	IOM Nov. 13, 1964 from Schurmeier to Ranger Block III D List, Subject: Ranger 9 Schedule	"
1893	NASA Memo Nov. 17, 1964 from O.W. Nicks to H.E. Newell, Subject: Ranger scientific mission	"
1894	Minutes of Ranger 8 and 9 Target Selection Meeting, Nov. 19, 1964	"
1895	NASA Memo 20 Nov. 1964 from SL/O.W. Nicks & NASA Residency/ P.E. Ross, Subject: Discussion on NASA Residency at JPL.	"
1896	Letter, Nov. 23, 1964 from N.W. Cunningham to Gordon Kautz, re proposals for flights beyond RA-9.	"
1897	Memo ^ , Dec. 1, 1964 from Gerard P. Kuiper to Co-Experimenters, Ranger Program.	"
1898	Section Report No. 355-6, TEMPERATURE CONTROL SUBSYSTEM, RANGER BLOCK III, RA-6 and RA-7, Dec. 1, 1964.	"
1899	TWX, Dec. 2, 1964 from Cunningham to Schurmeier regarding Ranger VII final report.	"
1900	J.J. Rennilson, ASTRONOMICAL OBSERVATIONS DURING FLIGHT OF RANGER VII, 16 Dec. 1964.	"
1901	Presentation of Ranger VII Mission Results, NASA HQ. Dec. 22, 1964	"
1902	Document, no date, entitled RANGER VII FLIGHT PERSONNEL [numbers involved and areas of work.]	"
1903	EPD-94, Assembly and Operations Plan, Ranger RA6789, June 11, 1962	Shelf
1904	EPD-45, SPACE FLIGHT OPERATIONS MEMORANDUM, RANGER I, 4 Oct. 1961	Files
1905	EPD-42, FIELD OPERATIONS MEMORANDUM, RANGER A-1, 8/30/61	"
1906	Manfred Eimer, "Lunar Environment," no date circa 1964 (lunar theory)	"
1907	Thomas Gold, "Outgassing Processes on the Moon and Venus," offprints from <u>The Origin &amp; Evolution of Atmospheres and Oceans</u> , ed. by P.J. Brancazio and A.G.W. Cameron, 1964 p. 249-256.	"
1908	E.M. Shoemaker, "The Geology of the Moon," <u>Scientific American</u> , Dec. 1964 Vol. 211, NO. 6, p. 38.	"

## SOURCE LIST #2

## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
1909	Document entitled, PRELIMINARY NOTES ON THE FINE STRUCTURE OF THE LUNAR SURFACE IN MARE COGNITUM, by Eugene M. Shoemaker, no date [from Schurmeier's files] 1964 or later	Files
1910	<del>Ranger</del> Document Fr. H.E. Newell's files dated May 1957, which is a suggested program to improve Rocket and Satellite Research Panel.	"
1911	"A National Mission to Explore Outer Space, (A Proposal by the Rocket and Satellite REsearch Panel) November 21, 1957 [Formerly Upper Atmosphere Research Panel]	"
1912	Hugh L. <del>Ryan</del> Dryden, "Space Technology and the NACA," for release upon delivery at luncheon meeting of the Institute of the Aeronautical Sciences, New York, N.Y. Jan. 27, 1958.	"
1913	Special Comm. on Space and Astronautics, U.S. Senate, 85th Congress, Second Session, <u>Compilation of Materials on Space And Astronautics, No. 1, March 27, 1958.</u>	"
1914	Spec. Comm. on Space and Astronautics, U.S. Senate, * 85th Congress, Second Session, <u>Compilation of Materials on Space and Astronautics, No. 2, April 14, 1958</u>	"
1915a	NASA memo 6 Oct. 1958 to Dr. Silverstein from H. Newell, enclosing notes which Silverstein requested.	"
1915b	Enclosure to above, entitled, "Space Center, Space Science Division," 6 Oct. 1958, giving charger and organization of the Space Science Division	"
1916	Document by Homer E. Newell, Jr., "The U.S. Program in Space Research," to be presented at Royal Society, London, on 12-13 Nov. 1958. [outlines space science areas of emphasis--essentially fields and particles with no planetology "atmospheres" covered the field.	"
1917	Letter by T.Keith Glennan, Oct. 21, 1958 to the Honorable John W. McCormack, Chairman of the Select Comm. on Astronautics and Space Exploration, regarding the organization of NASA.	"
1918a	Memo Oct. 23, 1958 from Abe Silverstein to Dr. Hugh L. Dryden, subject: NASA-NRL negotiations with regard to upper air and satellite research groups.	"
1918b	Enclosure to above, dated 3 Oct. 1958, AGREEMENT BETWEEN NASA AND NRL IN REGARD TO UPPER AIR AND SATELLITE SCIENCE PROGRAM AREAS.	"
1918c	Enclosure to above dated Oct. 17, 1958, Conference Report.	"
1919	Conference report dated Oct. 24, 1958, Subject: NASA-NRL Negotiations Relative to the Upper Air and Satellite Research Groups [conference held Oct. 17, 1958]	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
1920	Conference Report, Nov. 3, 1958, Subject: Naval Research Laboratory Files by H.E. Newell	
1921	Document in late 1958 [Nov-Dec] entitled RESPONSIBILITIES AND STEPS IN THE ESTABLISHMENT OF A SPACE SCIENCES PROJECT OR TASK	"
1922	Orgn. Chart 3 Dec. 1958 of Space Science Division	"
1923a Feb 6, 1959	Memo from John W. Townsend Jr., Chief, Space Sciences Div., to Homer E. Newell, Assistant Director for Space Sciences, Subject: Staff-Space Sciences Division [role and] Relationships [for Goddard SFC]	"
1923b	Attachment to above, organization chart, no date	"
1924	Document, 10 Feb. 1959, AREAS OF RESEARCH IN THE NASA SPACE SCIENCES PROGRAM	"
1925	Document, 12 Mar. 1959 by NASA entitled, THE UNITED STATES NATIONAL SPACE SCIENCES PROGRAM.	"
1926	NASA document, 16 April, 1959, NATIONAL SPACE SCIENCES PROGRAM	"
1927	NASA memo April 20, 1959 from Robert Jastrow to Homer E. Newell Jr. Subject: Soviet Plans for LUNAR Exploration	"
1928	NASA memo to Files 16 June 1959 from N.W. Cunningham, Staff Specialist Lunar Explorations Program, Subject: Lunar Explorations	"
1929	NASA memo to Abe Silverstein from H.E. Newell, 26 Aug. 1959, Subject: RECOMMENDATIONS FOR A LUNAR SCIENCE GROUP [History of NASA Lunar Explorations Working Group, relations with scientists before Apollo.	"
1930	Memo for the Director, Goddard SFC, Oct. 15, 1959, from Abe Silverstein Subject: Sterilization of Payloads	"
1931	NASA memo 20 Oct. 1959 from Homer E. Newell Jr. to J. Clark, Subject: Lunar-Mission Vega Payloads, Proposals for	"
1932]	Letter, 20 Nov. 1959, from Homer E. Newell, to Prof. Joshua Lederberg asking him to attend meeting of the Lunar Science Group on Dec. 1.	"
1933a	Memo from R. Jastrow to H.E. Newell, Dec. 11, 1959, Subject: REPORT ON DEC. 1 MEETING OF THE LUNAR SCIENCE GROUP.	"
1933b	Letter from T. Gold, Director of Cornell University, Dec. 7, 1959 to Dr. Robert Jastrow, restating points raised at NASA Moon Meeting regarding an early hard impact experiment on the moon.	"
1934	Document [NASA] 12/11/59, [Responsibilities for] THOR AGENA AND ATLAS AGENA FOR SPACE EXPLORATION.	"

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## RANGER

<u>ITEM NO.</u>	<u>ITEM</u>	<u>LOCATION</u>
1935a	Memo for the file, 30 Dec. 1959, from H.E. Newell, Subject: Trip Report for visit to JPL on 28 Dec. 1959 [to establish lunar and planetary programs philosophy]	Files
1935b	Enclosure to above, letter from Horner to Pickering, 12/16/59	"
1935c	Enclosure to 1935a, letter from Pickering to Silverstein, 12/17/59	"
1936	Memo to Files from Morton J. Stoller, Chief, Space Science Programs dated Jan. 12, 1960 Subject: Trip Report on Visit to JPL, 28-29 Dec. 1959 [Spacecraft Design goals, etc. & space science]	"
1937	Letter, Dec. 18, 1959 from H.E. Newell to Prof. Bruno Rossi, regarding Rossi's suggestion of a plasma probe to be landed on the moon.	"
1938	Letter 27 Dec. 1959, from H.E. Newell to Dr. Lloyd V. Berkner, Pres. of American Geophysical Union, accepting appointment as Chairman of Planning Committee on Planetary Science of the AGU	"
1939	Homer E. Newell, "The Space Environment," <u>Science</u> , Vol. 131, 12 Feb. 1960"	"
1940	Memo to File from M. Dubin, 29 Feb. 1960, Subject: Visit to JPL on 22 and 23 Feb. 1960 for Discussion of Micrometeorite Experiment for the Spacecraft I Payload	"
1941	First draft of Newell presentation at Industry Briefing in July 1960 of THE NASA SPACE SCIENCES PROGRAM	"
1942	Draft of letter <del>fr</del> to Dr. Pickering from H.E. Newell, 22 June 1960, in which he expresses regrets over Dr. P's resignation from the Rocket and Satellite Research Panel.	"
1943	Letter, 4 Nov. 1960, from H.E. Newell to Dr. Hans Hinteregger, Air Force Cambridge Research Center,	"
1944	NASA memo to Silverstein from Newell, 25 April 1961, requesting reassignment of duties per attachment.	"
1944	Attachment to above, 25 April 1961, showing reassignment of duties suggested by Newell to Silverstein.	"
1945	NASA document, NOTES ON A MEETING OF THE SPACE SCIENCES STEERING COMM. WITH SELECTED CONSULTANTS TO REVIEW A PROPOSED EXPANSION OF THE SPACE PROGRAM, 22 May 1961, by Henry E. Stauss, Sec., Space Sciences Steering Comm.	"

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## RANGER

<u>Item No.</u>	<u>Item</u>	<u>Location</u>
1946a	Memo for the Administrator, 24 May 1961 from H.E. Newell, subject: Consultants' Report on NASA Planning. [Meeting of 22 May]	Files
1946b	Report of Consultants dated 23 May, by Hess, Helliwell, Urey, Chamberlain, <i>Rossi</i> and Brouwer.	"
1946c	Report of Consultants dated 23 May, 1961 by Rossi. ( <i>Rossi's signed report missing</i> )	"
1947a	Memo June 2, 1961 from R.C. Seamans, Assoc. Admin, to Dr. Homer Newell Subject: Meeting of Space Sciences Steering Comm. with Selected Consultants	"
1947b	Memo for the Assoc. Admin. from H. Newell, June 15, 1961 Subject: Meeting of Space Sciences Steering Comm. with Selected Consultants [May 22], [scientist difficulties in space research.]	"
1948	Letter dated June 19, 1961 from Harold Urey to Dr. Newell, re discussion of landing sites on the moon.	"
1949	Letter dated <del>24</del> 29 June 1961 from H.E. Newell to Harold Urey thanking him for his thoughts on prospective landing positions on the moon.	"
1950	IOM, 6/13/63 from R.J. Parks to L.S. Frankenstein, Subject: Comments on "Proposed Instruction on Planning and Managing OSS Program."	"
1951	IOM 6/7/63 from B.T. Morris to R.J. Parks, Subject: Reliability Aspect of OSS Planning and Management Instruction Draft, dated May 17, 1963.	"
1952	NASA: Ranger Misfortunes Attract Attention of Congress <del>xxx</del> to Problems of Spacecraft Sterilization, <u>Science</u> , July 12, 1963	"
1953a	Transmittal letter datd Dec. 24, 1963 from Bellcome, Inc. to Dr. M.W. Malloy of JPL of an internal "Block III Ranger and Block I Surveyor Programs and Apollo Site Certification."	"
1953b	Abstract for "Block III Ranger and Block I Surveyor Programs and Apollo Site Certification," Dec. 20, 1963	"
1953c	Memo for file, Subject: "Block III Ranger and Block I etc. 12/20/63	"
1954	NASA memo, 11/20/63 from <del>W</del> N.W. Dunningham to O.W. Nicks, Subject: Ranger Block V PERT [and Program] Review, [Nov. 26]	"
1955	Letter, Nov. 27, 1963 from N.W. Cunningham to G. Robillard regarding Ranger Block V reporting system.	"

## SOURCE LIST #2

## Ranger

<u>Item No.</u>	<u>Item</u>	<u>Location</u>
1956	Administrators <del>xx</del> Progress Report, Status as of 30 Nov. 1963 N.W. Cunningham, Ranger Program Manager	Files
1957	Administrator's Progress Report, <del>xxx</del> Status as of 31 Dec. 1963 N.W. Cunningham, Ranger Program Manager	"
1958	TMI 37-1-1A, April 29, 1964, Conduct of Space Science <del>xx</del> Program- Selection and support of <del>Scientific</del> Scientific Investigations and Investigators. [NASA Management Manual]	"
1959	S.F. Singer and E.H. Walker, "Electrostatic Dust Transport on the Lunar Surface," reprinted <del>fx</del> from <u>Icarus</u> , Vol. 1 No. 2, Sept. 1962	"
1960	Document entitled RANGER C AND D TARGET SELECTION, which H.M. Schurmeier took to Washington 12/21/64	"
1961	Draft copy of Chapter V, History of Block III and IV, no date, [Part of Final Report?]	"
1962	Document, July 2, 1964, OFF STAFF MEETING, SIGNIFICANT PROBLEMS AND ACTION ITEMS.	"
1963	NASA Memo 19 June 1964 from SPA/Crocker to S/Newell, Subject: Report" of OSSA Staff Meeting June 11, 1964	"
1964	Memo to Mr. Callaghan from William L. Sturdevant, July 21, 1964 Subject: <del>K</del> arth briefing	"
1965	Report of the OSSA Staff Meeting, July 30, 1964	"
1966	NSL 63-161, RANGER PAYLOAD DELIVERY SUBSYSTEM (PDS) STUDY, Northrop Space Laboratories, Sept. 1963	"
1967	EPD-144, RELIABILITY PROGRAM PROVISIONS FOR RANGER BLOCK V, 6 May 1963	"
1968	NSL 63-248, NORTHROP PROPOSED BLOCK V MCPU PROGRAM, Oct. 1963	"
1969	Preliminary Draft, RANGER BLOCK V PROJECT, Jan. 1964	"
1971a	<del>Letter from M.E. Newell, Assoc. Admin. for Space Science &amp; Appl.</del> to Associate Administrator [AA] R.C. Seamans, Subj: Actions Taken by OSSA in Response to the "Final Report of the Ranger VI Review Board"	File
1971b	Enclosure to above REPORT OF OSSA BUY OFF COMMITTEE ON RANGER B SPACECRAFT PRESHPMENT MEETING OF JUNE 15-16, 1964.	"
1971c	Enclosure to 1971a, July 10, 1964, IOM from Newell to SEamans, <del>KANE</del> Subject: Ranger B Status Review.	"
1971d	Enclosure to 1971a, Jul. 23, 1964, IOM from Nicks to Newell, Subject: " Summary of Actions Taken in Response to Detailed Recommendations of the Ranger VI Review Board	"

**SOURCE LIST #2**

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Item No.	Item	Location
1972	NASA NEWS CONFERENCE BY James E. Webb, 15 April 1964	Files
1973	EPD-302, Space Flight Operations [Summary], Memorandum, Rangers Shelf VIII and IX, 9 Aug. 1965	
1974a	Lear, John, "What the moon Ranger couldn't see," <u>Saturday Review</u> , Files <del>xxx32xxx197, xxx319, x1264, Vol. 47</del> Sept. 5, 1964, Vol. 47.	
1974b	"The Portable Astronomer: Prof. Gerard P. Kuiper," <del>John Lear.</del> <i>will go with same mag. as above.</i>	
1975	Letters to the Editor by Gerard P. Kuiper, "The Ranger VII Report," " Oct. 10, 1964, <u>Saturday Review</u>	
1976	Telephone Interview with J.D. Burke, 10/15/69 re science vs. eng.	"
1977	B.P. Miller, RCA, comments on 1962 Chronology	"
1978	J.D. Burke's comments on 1960, Dec. 20, on LMSC/Agena	"
1979	G. Schilling of Rand comments on Ranger 6/23/70	"
1980	"Basic Questions about Moon Still in Doubt," <u>Nature</u> , Apr. 18, 1970	"
1981	<del>xxxxxx</del> Parts of the DSN History, early 1970 <del>xxxxxx</del> draft	"
1982	NASA letter from N.W. Cunningham to H.M. Schurmeier, 11/9/64, re review of Ranger 8 and 9 test and operations plan.	"
1983	Letter from Schurmeier to Dr. Himmel, Lewis, 7/5/64, Subject: Ranger Block III, RA-8 <del>Schedule</del> Schedule	"
1984	IOM, Oct. 16, 1964, from M.S. Johnson to R.J. Parks, Subject: Confirmation of consequences to the DSN resulting from a slip in the Ranger 9 Launch.	"
1985	TWX from N.W. Cunningham to H.M. Schurmeier, Oct. 28, 1964, re Ranger 9 <del>RA</del> Schedule	"
1986	Ranger C Status Review, Feb. 2, 1965 [Ra-8 Buyoff at ETR]	"
1987	Ranger Block III, MISSION Operations Plan, Ranger C, PD-33, Feb. 5, 1965	"
1988a	NASA Memo from Homer E. Newell to A/Administrator, Subject: Ranger C Lunar Flight Project, dated Feb. 8, 1965	"
1988b	Enclosure to above, Mission Operation Report No. S-801-65-08, Ranger C Lunar Flight Project, dated 2/8/65	"
1989	IOM 9 Feb. 1965 from D.A. Nelson to Distribution, Subject: Critique of Operational Readiness Verification Test No. 1 for Ranger 8.	"



## SOURCE LIST #2

<u>No.</u>	<u>Item</u>	<u>Location</u>
1990a	IOM 13 Feb. 1965, from <del>Rx</del> J.R. Kolden to A.E. Wolfe, Subject: RFI Activities on RA-8 at ETR.	Files
1990b	Attachment to above, entitled: Presentation of RFI Findings and Recommendations of JPL Communications <del>Rx</del> Given at RA-8 Buy-off meeting at ETR on Feb. 2, 1965.	Files
1991	IOM 15 Feb. 1965, from D.A. Nelson to Dist., Subject: Critique of Operational Readiness Verification Test No. 2 (VT-2) for Ranger 8.	"
1992	Ranger C (RA-8) Status Bulletins from 17 Feb. thru 24 Feb. 1965	"
1993	IOM, 22 Feb. 1965, from James/Felberg to Dist. Subject: GCAT and TCAT for Ranger and Mariner Missions.	"
1994	Ranger Block III, Biweekly Status Report as of 26 Feb. 1965	"
1995	Ranger VIII Post Flight Analysis Meeting, 2/26/65	"
1996	IOM Mar. 1, 1965 from B.T. Morris Morris to H.M. Schurmeier, Subject: Communications Performance Risks in Ranger D Mission.	"
1997	TWX sent Mar. 10, 1965 from Schurmeier to N.W. Cunningham, re "A" Camera noise spike and transponder power output drop during Ranger VIII midcourse maneuver.	"
1998	IOM 12 March 1965 from S.A. Brunstein to Schurmeier, Subject: RA-8 Radio Anomaly and Action.	"
1999	TWX Mar. 16, 1965 from E.E. <del>Christensen</del> Christensen, Dir. Mission Operations, NASA, to JPL, et. al. scheduling Ranger D for Mar. 21 and Gemini for the 23rd.	"
2000	PD-40, Ranger Block III, Mission Operations Plan, Ranger D, 3/19/65	"
2001	IOM Mar. 29, 1965 from Schurmeier to All <del>Section</del> Section Managers Subject: Final Ranger Meeting	"
2002	Document, Ranger IX Postflight Analysis Meeting, 4/21/65	"
2003a	Cover letter from R.W. Carder, Technical Planning Div. of the Aeronautical <del>Rx</del> Chart & Info. Center, USAF, 21 April 1965, forwarding proposal.	"
2003b	Proposal dated April 20, 1965 from ACIC, Subject: Proposal for Ranger VIII and IX <del>Charting</del> Charting.	"
2004	Document dated 17 May 1965, System Test and Operations Report, Ranger Block III, PTM Spacecraft.	"
2005	Ranger Block III Biweekly Status Report, 14 May 1965	"

## Source List #2

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<u>Item No.</u>	<u>Item</u>	<u>Location</u>
2006	Document compiled by N.A. Renzetti, DSN Manager for Ranger, entitled "Report of Critique of Ranger 8 and 9, Tracking and Data Acquisition Support," June 23, 1965.	Files
2007	Minutes of Meeting No. 40, Lunar and Planetary Projects, Tracking, Telemetry, and Communications Panel, The Boeing Co. Aug. 31, 1965	"
2008	Production of Ranger VIII and IX Charts, Quarterly Progress Report No. 1, 30 July 1965 - 30 Sept. 1965, ACIC	"
<del>2008</del> 2009	Production of Ranger VIII and IX Charts, Quarterly Progress Report No. 2, 1 Oct. 1965 - 31 Dec. 1965, ACIC	"
2010	Production of Ranger VIII and IX Charts, Quarterly Progress Report No. 3, 1 xx Jan. 1966 - 31 Mar. 1966, AEIC	"
2011	Letter from Gerard P. Kuiper of University of Arizona to H.M. Schurmeier re Experimenter's meeting of Oct. 23-24, dated 28 Oct. 1964.	"
2012	Letter from H. M. Schurmeier to G.P. Kuiper, Nov. 6, 1964 in answer to above.	"
2013a	Letter from G.P. Kuiper to Tom Vrebalovich, 10 Nov. 1964, enclosing proposal, dated 10 Nov. 1964	"
2013b	Proposal entitled, RANGER VII EVALUATION 10 Nov. 1964.	"
2014	NASA letter from N.W. Cunningham Nov. <sup>17</sup> 19, 1964 to Dr. Kuiper, 11/19/64" regarding his proposal sent to Schurmeier.	"
2015	Letter from N.W. Cunningham to Schurmeier 12/31/64 regarding long-range task of Ranger photo interpretation.	"
2016	Letter from G.P. Kuiper to H. Urey, 4 Jan. 1964 enclosing revised version of a paper presented in Washington Dec. 22 [enc. not included]"	"
2017	Letter from G.P. Kuiper to Schurmeier, 4 Jan. 1965 enclosing revised version etc.	"
2018	Letter from H.C. Urey, UCSD, dated Jan. 6, 1965 to Dr. Kuiper disputing interpretation of Ranger pictures.	"
2019 a-c	Experimenter Meeting Minutes, Jan. 15, 1965	"
2020a	Letter from Even A. Whitaker of U of Arizona enclosing: Ranger Final Report, Jan. 29, 1965	"
2020b	FURTHER OBSERVATIONS ON THE RANGER VII RECORDS, by E.A. Whitaker	"

## Source List #2

## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2021a	Letter Feb. 1, 1965 from Schurmeier to Cunningham, enclosing:	Files
2021b	Document as enclosure to above LONG-RANGERRANGER DATA ANALYSIS	"
2022	Minutes of Ranger Experimenters Meeting, Feb. 10, 1965	"
2023a	NASA memo from H.E. Newell to M/Assoc. Admin. for Manned Space Flight, subject: <del>xxxx</del> Ranger 8 Target selection, Feb. 11, 1965	"
2023b	NASA memo from O.W. Nicks to S/Assoc. Admin. for Space Science & Applications, Feb. 9, 1965, Subject: Ranger 8 Target Selection review and final recommendations	"
2023c	NASA document RANGER # 8 LUNAR TARGET SELECTION REVIEW, NASA Hq. Feb. <del>xxx</del> 6, 1965.	"
2024	NASA News Release No. 65-35 NASA DISTRIBUTES RANGER VII PHOTOS TO WORLD SCIENTISTS, Feb. 15, 1965	"
2025	TWX from Schurmeier to Cunningham, Feb. 15, 1965 regarding distribution schedule for Ranger 8 data for preliminary engineering and scientific evaluation.	"
2026	TWX dated Feb. 18, 1965 from Nicks to Luedecke, re. buyoff meeting held at JPL on Feb. 9, 1965.	"
2027	Letter from Newell to Schurmeier, Feb. 23, 1965, congrats on RA-8	"
2028	Letter from D.U. Wise of <del>Ex</del> Franklin and Marshall College to Dr. Urner Liddel of NASA, Feb. 24, 1965, regarding Ranger targets.	"
2029	IOM Feb. 26, 1965 from W.E. Giberson to H.M. Mchurmeier, Subject: Selection of Ranger Landing site.	"
2030	Letter from G.P. Kuiper to Schurmeier, 1 Mar. 1965	"
2031	Letter from R. Heacock, to Cunningham, regarding target selection for Ranger IX.	"
2032	Letter from D.U. Wise to Dr. Urner <del>La</del> Liddel, Mar. 18, 1965, in which he suggests possible insertion of bias toward the east in the mid course maneuver [RA-9]	"
2033	Letter from Newell to Schurmeier, 25 Mar. 1965, congrats on RA-9	"
2034a	Ranger IX Press Conference, Mar. 24, 1965	"
2034b	" " " " " " PIO output.	"
2035	IOM April 1, 1965 from Schurmeier to Dist, Subject: Remaining Ranger Test Requirements.	"

## Source List #2

### RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2036	Letter from N.W. Cunningham to H.M. Schurmeier, Apr. 5, 1965 giving congrats for Ranger 9.	Files
2037a	IOM from F.C. Billingsley to Dist., April 8, 1965, Subject: Report on Bimat Film Processing	"
2037b	Enclosure to above JPL SPS 38-33, Vol. IV input entitled Bimat Film Processing for Ranger IX	"
2038	Ranger IX Postflight Analysis Meeting, April 21, 1965	"
2039	Ranger D Status REview, Mar. 16, 55 at ETR	"
2040	IOM May 6, 1965 from G. Smith/R. Nathan to E.R. Lawrence, Subject: Ranger Data Processing Review	"
2041	IOM May 11, 1965 from Schurmeier to Dist., Subj: Minutes of the Final Ranger Quarterly Review held at JPL on 21 April 1965.	"
2042	Minutes of Ranger Experimenters Meeting at JPL, May 12, 1965	"
2043a	Memo to Dr. Pickering from Julian Sheer, Asst Adm. for Public Affairs NASA, dated May 14, 1965 with the attached.	"
2043b	U.S. Information Service, April 21, 1965, Subject: 34d Int'l Scientific Film Festival, From USIS Brussels to USIA Washington.	"
2044	IOM 5/18/65 from Schurmeier to R. Serlin, Subj: RCA Support of Ranger Impact Tests.	"
2045	IOM from Clifford H. Nelson, <sup>Lunar Orbiter</sup> Project Manager of Langley Research To Schurmeier, May 19, 1965, Subject: Participation of Lunar Orbiter Personnel in Ranger Missions	"
2046	Letter from Cunningham to Schurmeier, May 26, 1965 regarding s/c dynamic tests and studies being conducted by George Nichols.	"
2047	IOM June 7, 1965 from Schurmeier to Dist., Subject: Remaining Ranger Dynamic Tests.	"
2048	Letter June 28, 1965 from Vrebalovich to Urey	"
2049	IOM from Serlin to George E Nichols, 6 July 1965 Subject: RCA-AED Activity in the Lunar Impact Investigation under Contract MOD 56 to Contract 950137.	"
2050a	IOM 7/1/65 from G.E. Nichols to R. Serlin, Subj: RCA Activity under COM No. 56.	"
2050b	SUMMARY MEMO REPORT, by G.E. Nichols 7/1/65, attach to above	"

## SOURCE LIST #2

## Ranger

<u>No.</u>	<u>Item</u>	<u>Location</u>
2051	Letter, July 29, 1965 from G.P. Kuiper to H.M. Schurmeier, asking for an extension of deadline for interpretation of Ranger photos	Files
2052	Letter, Aug. 6, 1965, from Schurmeier to Kuiper, delaying publication until Sept. 7, 1965 for input to JPL Reports Section.	"
2053	Letter 23 SEpt. 1965 from O.W. Nicks to Alvin R. Luedecke, <del>fx</del> re Ranger data analysis.	"
2054	Letter, Dec. 8, 1965, from N.W. Cunningham to H.M. Schurmeier, regarding experimenters' reports.	"
2055	Document, no date, PROJECTILES FOR RANGER SPACECRAFT	
2056	TWX dated 3-24-65 from Earl D. Hilburn, Acting Assoc. Administrator to W.H. <del>Rick</del> Pickering, congratulations.	"
2057	Harold C. Urey, "Meteorites and the Moon," <u>Science</u> Mar. 12, <del>1965</del> 1965	"
2058	Letter from G.P. Kuiper 4 Aug. 1970 giving Ranger Block III scientific results, [Letter to R.C.Hall]	"
2059	"The Place Looks Familiar," from West, <u>Los Angeles Times</u> , Mar. 29, 1970 regarding Hollywood space films.	"
2060	NASA memo from Newell to Mueller, Jan. 19, 1965, Subject: Ranger 8 Lunar Target Selection.	"
2061	NASA memo from Mueller to Newell, Jan. 26, 1965, Subject: Ranger Lunar Target Selection.	"
2062	NASA memo from Maj. Gen. S.C. Phillips to O.W. Nicks, 16 Oct. 1964 Subject: Ranger 8 Aim Point.	"
2063	George Baker, 9-21-64, THE RANGER BLOCK V SCIENCE SYSTEM	Shelf
2064	NASA Document, "Requirements for Data in Support of Project Apollo," Issue No. 1, OMSF, June 15, 1962	File
2065	JPL IOM from Don Kindt to Dist. <del>3/8</del> 3/9/62, Subject: Change in Camera Alignment of RCA Ranger TV Subsystem.	"
2066	Conference Report LPD-10 Mar. 20, 1962, by C.I. Cummings regarding trip to NASA Hq. on 3/15/62, re Dr. Shea's office [Systems Engineering of OMSF] and also gives organizational chart of Holmes office [OMSF]	"
2067	JPL, IOM from R.L. Heacock, to G. Kautz, 4/13/62, Subj: Ranger Follow-On Scientific Experiments.	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2068	IOM 5/31/62 from R. Brereton to H. Lawrence, Subject: Scientific Results from the General-Motors High-Speed Impact Study.	Files
2069	Minutes of NASA AMR Agena Management Meeting of June 25, 1962.	"
2070 a	Letter from RCA, J.E. Coburn, Marketing Representative, to John Small, Subject; Lunar Orbit Capsule Study, JPL Contract No. 950340, Ref. Presentation at JPL 7/10/62	"
2070b	Document from RCA, "Lunar Orbiter," presented to NASA on 3 August <del>1962</del> 1962.	"
2071	Memo from Kurt H. Debus, Director of LOC to Hans Hueter, Director of Light and Medium Vehicle Office at MSFC, Aug. 17, 1962, Subject: Program Requirements Document for NASA AMR Atlas-Agena Programs.	"
2072	Letter from F. Duerr, Agena Systems Manager of MSFC to Major J. Albert, USAF, giving account of failures of RA-3, RA-5 and MR-1, and suggesting an investigation of the Mod III G guidance system. <i>from Feb 25, 1963</i>	"
2073	Document entitled "Ranger Design Program," from Schurmeier/Wolfe, 12/17/62, JPL Discreet.	"
2074a	IOM from M.S. Johnson to Distr., March 21, 1963, Subject: Charter of the Ranger, Mariner, and Fire Tracking, Telemetry and Communications Panel.	"
2074b	Above <del>char</del> charter dated March 18, 1963.	"
2074c	Above charter revised and dated Nov. 1, 1963.	"
2074d	Letter from J.D. Burke to F. Duerr, March 14, 1962, Subject: Agena B Tracking Communication, In-Flight Measurement and Telemetry Panel.	"
2075	IOM from V. Clarke to Distribution, April 1, 1963, enclosing "CHARTER OF THE ATLAS/AGENA LUNAR AND INTERPLANETARY MISSIONS PANEL FOR PERFORMANCE CONTROL, TRAJECTORIES, GUIDANCE AND CONTROL, AND FLIGHT DYNAMICS, dated March 23, 1963.	"
2076	Letter Oct. 25, 1963 from Serlin/Kindt to J Davison and B.P. Miller of RCA, Subj: Continental Devices Diodes.	"
2077	NASA News Release dated May 15, 1963, addresss by James E. Webb at 2nd Nat'l Flight Forum Symposium, Hartford, Conn.	"

## SOURCE LIST #2

RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2078	IOM 2/12/64 from W.J. Downhower to D.H. Kindt, Subject: Committee of Section Chiefs Reviewing RA-6 Flight.	Files
2079	TWX dated 5/26/64 from W.H. Pickering to H.E. Newell, regarding action to be taken on Ranger based on meetings with NASA on May 14 and 18 and 19.	"
2080	Rough Draft dated 12/27/65 of ED-333, RANGER LAUNCH VEHICLE INTEGRATION SUMMARY.	"
2081	JPL IOM dated June 25, 1964 from M.A. Piroumian to Distr. Subject: <del>Experiments</del> Presentation on Ranger Investigations Concerning Launch to Injection Environment., JSC	"
2082	JPL IOM dated June 17 1964 from M.A. Piroumian to H.M. Schurmeier" Subject: Analysis of High voltage and RCA test results: Meeting on 12 June 1964.	"
2083	JPL IOM dated June 5, 1964 from M.A. Piroumian to H.M. Schurmeier" Subject: XX Status of Ranger Investigations Concerning Launch to Injection Environment; Minutes of Conference on 3 June 1964.	"
2084	IEM from A. Bratenah. to C. Campen, Aug. 3, 1964, Subject: Current Thinking on Effects of Booster Separation as Cause of Accidental Turn-on of RA-6 TV.	"
2085	IOM from R.J. Mackin, Jr. from R.V. Meghreblian, <del>1/8/65</del> 2/8/65 Subject: Electrostatic Charging of Launch Vehicles During Ascent.	"
2086	Letter dated Nov. 16, 1964 from Joseph F. Shea, Manager, Apollo Spacecraft Program Office, to H.M. Schurmeier, re: target selection for Rangers VIII and IX.	"
2087	Aerojet-General Corp., <u>Development of a Lunar Grenade</u> , Summary Report, Sept. 1961 to July 1962, JPL Contract 950134	"
2088	Judith Ann Zink, "Lunar Cartography: 1610-1962," M.A. Thesis, University of California, L.A., June 1963.	"
2089	Project RAND Research Memo-1731, <u>Lunar Instrument Carrier Tracking and Communication</u> , by R.T. Gabler, H.R. O'Mara, June 4, 1956.	"
2090	May 1965 Issue of Lab-Oratory	"

## SOURCE LIST #2

RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2091	NASA, Summary Minutes of the Space Sciences Steering Comm. August 21, 1961.	Files
2092	IOM 11/7/62 from D. Willingham and R. Brereton to J. Fisher and B. Kirhofer, Subject: Lunar Impact Point Selections for Ranger 6.	"
2093	IOM Feb. 24, 1961 from M.S. Johnson to J.D. Burke, Subject: [History of] AMR Instrumentation & Tracking for Ranger	"
2094	IOM, Sept. 9, 1960 from C.I. Cummings to G. Kautz, regarding <del>Ranger</del> commitment of Hangar AE for the Ranger Program.	"
2095	Letter Nov. 12, 1960 from <sup>Gribbon</sup> <del>Lusk</del> of Lockheed to Maj. Albert of USAF, Subject: NASA Agena B Trajectories Analyses.	"
2096	Copy of letter from B.A. Schriever of USAF, Nov. 16, 1960, to Dr. Glennan, explaining the role of the Aerospace Corp is playing in the Air Force support of NASA.	"
2097	NASA memo dated Dec. 7, 1960 from R.C. Seamans to NASA Field Center Directors, Subject: Launch Vehicle Characteristics	"
2098	Letters regarding Ranger shroud and separation problem ?	"
2098a	Letter dated Jan. 17, 1961 from Burke to Hueter of MSFC	
2098b	<del>Enclosure to above giving minutes of LMSD meeting Jan. 5, 6, 1961</del>	"
2098p	JPL IOM 12/21/60 from Alan Forsythe to Frank Goodwin, Subject: Ranger Separation	"
2098c	Letter Jan. 13, 1961 from D.J. Gribbon of LMSD to Hueter of MSFC, Subject: Separation of Ranger Nose Cone.	"
2099	IOM 1/3/61 from E.F. Dobies to A. Conrad, Subject: RA-3 and RA-4 Impact Point Locations	"
2100	Document dated 1/26/61, entitled "Miscellaneous Points	"
2101	IOM 3/15/61 from M.R. Mesnard/A. Conrad to Distribution, Subject: Change of Ranger Impact Areas and Dates of Launch.	"
2102	TWX March 27, 1961 from L. Pehl, JPL to Aeronutronic, Subject: Contract N-21433, Lunar Rough Landing Capsule, authorizing a subcontract to Miley Electronics for the Altimeter.	"



## SOURCE LIST #2

### RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
21030	Memo for Director of Launch Vehicle Programs from Abe Silverstein Subject: Implementation of NASA Management Inst. 4-1-1, 3/29/61	Files
21034c	Enclosure to above to All Concerned from A. Silverstein, Subject: Assignment of Ranger Project Manager	"
2103b	Enclosure to above to All Concerned, Subject: Assignment of Surveyor Project Manager	"
2104	IOM from H.J. Stewart to F.E. Goddard, Jr. 4/7/61, Subject: The Max Planned Number of Flights in a Flight Test Series.	"
2105	Letter from J.D. Burke to NASA-WOO, E.J. Sample, April 27, 1961 asking for assistance in scheduling a second series of Aeronutronic/Hercules Powder Co. Capsule Retromotor test firings at Arnold Engineering Dev. Center.	"
2106	IOM from G. Cushing to L Pehl 5/4/61, Subject: Altimeter "Echo Strength" Conditioning for T/M Lunar Capsule - RA-3.	"
2107	IOM from M.R. Mesnard to distribution, 5/9/61, Subject: RA-345 Lunar Reflectivity Telemetry Modification.	"
2108	Letter from H. Hueter, MSFC, to J. Burke, Subject: Reorganization of Agenas and Centaur Systems Office, MSFC, enclosing organization charts of the Light & Medium Launch Vehicle System, Agena B Vehicle System, Centaur Launch Vehicle System, and Scout Launch Vehicle System, dated May 12, 1961.	"
2109	Aeronutronic Division <sup>of</sup> <del>in</del> Ford Motor Co. IOM from R.F. Nease to Dist. Subject: Meeting of 5/19/61 with JPL at ADF	"
2110a	IOM 6/8/61 from L. Pehl to Jim Burke transmitting following twx's subcontract.	"
2110ab	TWX from ADF, 6/7/61 to Ryan regarding termination of Altimeter	"
2110c	TWX from Ryan to ADF 6/6/61 asking technical and schedule questions as well as reason for termination.	"
2111	ADF IOM June 9, 1961 from W.D. Longyear to W.H. Schilling Subject: Summary Report of the Simulated Lunar Landing Test.	"
2112	TWX dated 6-2-61 from Aeronutronic to L. Pehl, JPL quoting terminating wire sent to Ryan.	"
2113	Document dated 6/6/61 by F. Duerr, MSFC, entitled, "NASA Agena-B Management Meeting #2, MSFC."	"

## SOURCE LIST #2

## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2114	IOM July 21, 1961 from V.C. Clarke to J.D. Burke, Subject: LMSD Trajectory Operations.	Files
2115	IOM July 24, 1961 from C.G. Pfeiffer to J.D. Burke, Subject: Comments on LMSD Management of Atlas/Agena Analysis Effort.	"
2116	IOM from M.J. Boyle to J.D. Burke, 7-25-61, Subject: Problem Areas Associated with Performance Panel Activity.	"
2117	Trip Report to J.D. Burke, et. al., from Piasecki/Cushing, 7/27/61 Trip to Bacchus Works of Hercules Powder concerning status of retro-rocket for Ranger RA-3 on July 26, 1961.	"
2118	Notes to Log, dated 7/27/61 Milwitzky to Kautz.	"
2119	IOM Aug. 10, 1961 from L.M. Bronstein/A.E. Dickinson to Distribution Subject: RA-1 Spacecraft Failure Analysis.	"
2120	Letter Aug. 10, 1961 from J.D. Burke to F. Duerr, MSFC, suggesting procedure to clarify responsibilities of MX LMSC, STL and JPL for publication of final standard trajectory for Rangers 1 thru 5.	"
2121	TWX Aug. 15, 1961 from MSFC to J.D. Burke in answer to Aug. 10 letter and agreeing with procedures.	"
2122	IOM dated Aug. 16, 1961 from J.D. Burke to Division Chiefs and Managers" giving guidelines for implementation of the Follow-On Preliminary PDP.	"
2123	Letter dated Aug. 26, 1961 from F. <del>Duerr</del> Duerr of MSFC to H. Lusk of LMSC, regarding <del>xxxx</del> trajectory and range safety analysis.	"
2124	JPL News felease of Aug. 29, 1961, announcing four additional Ranger spacecraft by Dr. Seamans.	"
2125	IOM 9/1/61 from J.D. Burke to Distribution, Subject: Ranger Follow-on" giving approval of the Ranger Follow-on by NASA Hq.	"
2126	IOM 9/28/61 from R.P. Mathison to G.P. Kautz, Subject: LRC Penetrometer Capsule	"
2127	Letter 10/9/61 from J.D. Burke to O.W. Nicks, Subject: Ranger Seismometer Capsule, RA-345	"
2128	Conference Report of 10/5/61 at Aeronutronic, prepared by L. Pehl, of an overall technical review of the status of the Aeronutronic contract for the Lunar Seismometer Capsule System.	"
2129	Letter Oct. 18, 1961 from Norman/Denison of ADF to J.H. Main of Hercules" Subject: Intent, Responsibility and Authority of Aeronutronic Reps at Bacchus	"

## SOURCE LIST #2

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2-2130	Letter 11/15/61 from H.E. Newell to Dr. Donald F. Hornig, Princeton University regarding administrative org reorganization of NASA.	Files
2-2131	IOM 11/15/61 from P.K. Eckman to H.M. Schurmitter, Subject: Ranger Follow-up Capsule Orbiters	"
2132	TWX 11/15/61 from J.D. Burke to R.E. Pace of LMSC regarding flight of Ranger 1.	"
2133	Document by A.E. Dickinson, Nov. 29, 1961, "RA-2 Preliminary Spacecraft Performance Report."	"
2134	Trip Report of Meeting of USAF Failure Investigation Board at LMSC, 11/27 and 11/28/61 by J.D. Burke.	"
2135	Letter from Donal B. Duncan, ADF to L.C. Pehl, JPL, Subject: Contract N=21453, Supplemental Info regarding request for add. funds.	"
2136	Agena B Failure Investigation Board document, 11/30/61	"
2137	IOM from D.H. Kindt to G. Kautz, 12-4-61, Subject: History of RCA contract	"
2138	Trip Report by J.D. Burke, Subject: Ranger II Failure Review (12-4) and Agena Management Meeting (1205) Washington, D.C.	"
2139	Letter from Luskin of LMSC to Duerr of GMFC, Subject: Umbilical Release System, Agena, Complex, 12, AMR.	"
2140	NASA, Memo to Dr. Seamans regarding Cortrights message on Ranger 3 scheduling, 12/21/61	
2141	NASA document dated 1 Jan. 1962, "Duties of Chief Scientist, Office of Space <del>Sciences</del> Sciences."	"
2142	From J.G. Albert, Major USAF to DCQOC (Capt. Boyette), memo dated Jan. 22, 1962, Subject: <del>Command Post Access List for Ranger Program Activities</del> Command Post Access List for Ranger Program Activities.	"
2143 a4b	Iom, 1-26-62, from J.J. Rennilson to C.I. Cummings, Subject: List of Observatofies Cooperating with JPL in Observation of Ranger 3 Flight and Impact.	"
2148]]	IOM, 2-2-62, from R.L. Heacock to D. Kindt, Subject: RCA Ranger Follow-on Design Modification.	"
2145	NASA memo Feb. 21, 1962 for Director, Program Review and Resources Management, from H.E. Newell, Subject: Organization, Responsibilities, Authorities, and [Philosophy] Operation of the Office of Space Sciences.	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2146	IOM, FEB. 27, 1962, from R. Heacock to J.D. Burke, Subject: RCA Ranger Follow-On TV System Change Problems	Files
2147	Letter, Feb. 28, 1962, from J.D. Burke to N.W. Cunningham, Subject: NASA Flight Schedule	"
2148	TWX, Mar. 9, 1962, from C.A. Hemler, JPL to E.E. Deimund, RCA, requesting proposal for color technique for cameras under contract.	"
2149	Document entitled "Failure Report for DSIF and Telecommunications Operations for Ranger 3," March 9, 1962	"
2150	Letter May 15, 1962 from N.W. Cunningham to J. Burke, confirming May 10 conversation not to consider flying capsule bombs on RA-5	"
2151	IOM, 5/16/62 from D. Williams to C. Campen, et. al., Subject: Ranger Follow-on Camera Characteristics.	"
2152	IOM, 5/22/62 from M.S. Johnson to Distribution, Subject: AMR Contacts	"
2153 K	IOM June 22, 1962 from S. Rothman to Distribution, Subject: Status Report Ranger Follow-On (7-9)	"
2154	Mod. 2 [The Definitive Contract] to Contract 950348 with Marshall Labs, for <del>xxxxxx</del> Search Coil Magnetometer with Spectrometer, July 20, 1962.	"
2155	IOM from R.B. Harker to J.F. Koukol, Aug. 30, 1962, Subject: Procurement <del>sax</del> Schedules for Ranger 10-14.	"
2156	IOM Aug. 31, 1962 from J.B. Berger to Ranger Follow-On Distribution, Subject: Ranger Follow-on (RA 10 thru 14) Subsystem delivery dates.	"
2157	IOM, Sept. 20, 1962 from R.L. Heacock to Dist., Subject: Ranger FO Photography	"
2158	Letter, Sept. 27, 1962 from A.J. Manna, Contract Rep. of RCA-AED, to John Klose, JPL, Subject: Lunar Orbiter Capsule Study, Phase II, JPL Contract 950340.	"
2159a	Letter from O.W. Nicks, 10-1-62 to C.I. Cummings enclosing:	"
2159b	NASA Memo Oct. 1, 1962 from W.B. Taylor to B. Milwitzky, Subject: Ranger-Surveyor Data for Lunar Logistic System Studies.	"
2160	R.D. of IOM dated Oct. 18, 1962 from J. Burk to N. Cunningham, giving recommendations for the Ranger 10-14 scientific experiments.	"
2161	IOM, Oct. 12, 1962 from J.D. Burke to All Concerned, Subject: Interaction between Bluegill and Ranger	"

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### RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2162	IOM, Oct. 24, 1962, from J.D. Burke to All Concerned, Subject: Ranger Schedule Change	Files
2163a	Memo from Major Albert, USAF, Nov. 9, 1962, to MSFC, JPL, and NASA Hq., Subject: Reliability Improvement on Ranger <del>xx</del> 6 Booster Air Force	"
2163b	Advance copy of TWX sent to <del>SEA</del> , Nov. 5, 1962, from G.D.A., Subject: "Reliability Impovement Program, Missile 25 <del>g</del> D, TCP 8076.	"
2164	Mod. 2 to Contract 950462 in late 1962.	"
2165	NASA Ames Center RRelease, dated Nov. 29, 1962, Subject: Space Sciences Division formed at Ames REsearch Center.	"
2166	Letter, Dec. 4. 1962, from G.P. Kuiper to J.D. Burke, recommending the TV continue on Rangers 6,7,8 and 9.	"
2167	<del>Fix</del> JPL Tech. Memo 312-276, Feb. 26, 1963, IOM from T.H. Thornton Jr. to T.W. Hamilton, Subject: Realistic Midcourse Propellant REquirements for Ranger <del>ix</del> spacecraft.	"
2168	IOM 3/11/63 from J.D. Burke to H.M. Schurmeier, Subject: Conference Report on OSS-SSSC Planetology Subcommittee Meeting in Wash. D.C. Mar. 4-6, 1963.	"
2169	Letter March 11, 1963 from R.J. Parks to S.C Himmel of Lewis, Subject: LMSC <del>Targetix</del> Targeting of Space Probes.	"
2170	Letter from S.G. Himmel, LeRC to Schurmeier, Subject: Ranger Blocks 4 and 5 Vehicle Performance Capability.	"
2171	NASA Memo <del>fix</del> for Mr. Webb from H.E. Newell, April 2, 1963, giving additional thoughts on benefits to be derived from the space science program.	"
2172	IOM May 17, 1963, <del>IOM</del> from <del>Megxxx</del> R.V. Meghreblian to H.M. Schurmeier" Subject: Proposed Ranger Block 5 Mission Objectives, with enclosure.	"
2173	IOM 6-6-63 from K. Coon to H. Schurmeier, enclosing Organization Chart for Ranger Block V.	"
2174	Letter from R.E. Horner of Northrop to C.C. Cook, JPL, 19 June 1963, Subject: Supplemental Cost Proposal, Ranger Spacecraft System, Initial Phase II.	"
2175	IOM June 10, 1963 from K. Coon to Distribution, Subject: Evaluation of Northrop Proposal for Phase II Activities.	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2176	E.M. Shoemaker, "The Moon Close Up," <u>National Geographic</u> , Nov. 1964	Files
2177	Document dated 1/30/61, entitled "Agena Frustrations", Summary of Agena Problems.	"
2178	Leonard D. Jaffe, "Lunar Surface Strength", Reprinted from ICARUS: <u>International Journal of the Solar System</u> , Vol. 6, No. 1, 1-1967 Technical Report 32-1068 NASA , pp. 75-91. (Jan. 1967)	"
2179 <sup>a, b, c, d</sup>	Minutes and notes of Lunar Performance Panel Meeting, 2-16-61	"
2180	R. C. Hastrup, JPL TR # 14-RA, "Task Determination of Ranger Block IV & V Launch Vehicle Payload Capability" June 1963.	"
2181	Meeting, System Contractor, February 12, 1963, Ranger evaluation	"
2182	Document, System Contractor, "Statement of Work", Blk IV & V, October 1, 1962.	"
2183	Interoffice Memorandum, From: M. Lerner/W. A. Hagemeyer To: Distribution, Subject: Space Simulator Thermal Tests on Ranger Block III, Flight Spacecraft, October 8, 1963.	"
2184 <sup>a, b</sup>	Letter to Dr. William H. Pickering from Homer E. Newell, 2-14-64 Attached is letter to Mr. Newell from Congressman George Miller, Chairman of the House Committee on Science and Astronautics.	"
2185	Interoffice Memo To: H. M. Schurmeier From: M. A. Piroumian May 4, 1964, Subject: Electric Charge and Discharge Problem; Meeting at STL on April 21, 1964.	"
2186	Interoffice Memo, From: H. M. Schurmeier To: Distribution Subject: Investigations of Possible Ranger Problems Due to Launch to Injection Environment, June 2, 1964.	"
2187	Maurice Piroumian, R. J. Mackin, Jr., Comments of Meeting held June 3, 1964, concerns shock waves generated by the release of liquid oxygen . . .	"
2188	Interoffice Memo from: G. P. Kautz To: Distribution, Subject: Minutes of Meeting held June 18 Concerning the Laboratory Internal Information System for Ranger 7, June 26, 1964	"
2189	A Magazine article "Ranger TV Performed Near Design Point" by Kenneth J. Stein, <u>Space Technology</u> section, <u>Aviation Week &amp; Space Technology</u> , August 17, 1964, camera position pictures shown.	"

<u>No.</u>	<u>Item</u>	<u>Location</u>
2190	Document, Newton W. Cunningham's telephone conversation with Don Willingham on OMSF Ranger 8 Target Selections, February 1, 1965.	Files
2191	Document, from Newton W. Cunningham, notification of a meeting to be held, Subject: Ranger 9 Target Selection, March 5, 1965.	"
2192	Minutes of interview with Alex Brentomall, August 25, 1970.	"
2193	Document, From: V. C. Larsen, Jr., Subject: Request for Board Approval of Subcontracts, 7-28-61. Items to be discussed at next Board Meeting.	"
2194	Letter To: R. Cargill Hall From: James R. Arnold, University of California, San Diego, June 12, 1970, Subject: Reviving NASA's interest in lunar science.	"
2195	Interoffice Memo, To: J. D. Burke, From: C. G. Pfeiffer Subject: History of the Atlas/Agena Trajectory Management Problem, January 16, 1961.	"
2196	Document, JPL "Lunar Orbiter Capsule Study", August 23, 1962 Statement of Work, Phase I and Phase II.	"
2197	Document, From: C. I. Cummings, To: Division Chiefs, Subject: Lunar Program Organization, 7-24-61 Lists responsibilities of Staff Members.	"
2198	<del>XXXXXXXX</del> Pamphlet, JPL, <u>Ranger</u> , "A Lunar Exploration Spacecraft" NASA, 1965.	"
2199	Letter, NASA Mgt., To: John F. Stone, From: J. D. Burke, JPL, Subject: Attached comments on Space System Development Plan NASA Agena B Program WDLPR-391, Aug. 12, 1960.	"
2200	<u>ETR Mission Operations Summary</u> , Ranger C (RA-8) "Summary of Launch Countdown and Immediate Post-launch Operations", February 22, 1965, Approved: H. N. Levy, Jr. JPL/ETR Field Station.	"
2201 a, b, c	INTEROFFICE MEMO, From: I. E. Newlan, To: Senior Staff, Subject: Ranger D Launch Date, February 11, 1965. All data in conjunction with launching.	"
2202	H. Wheelock, Sec. 293, Bulletin, Ranger 8, ETR Operations, Daily Flash Report, Launch Bulletin, February 17, 1965, Report No. 30	"
2203	Performance Trajectory Notes from Gordon Kautz, 6-8-61	"
2204	Notes from Block V Capsule meeting, 7-22-63, "Proposal for Ranger Approach and Surface-Landed TV Experiment attached.	"
2205	Document, "RA-5 Scientific Experiments Data Handling", n.d.	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2206	JPL article, Information Plan, Ranger Follow On, Oct. 1961	Files
2207	Interdepartment Memo, From K. C. Coon To: L. S. Frankenstein 8-6-63, Subject: Ranger Block V Status Information for Center Directors Quarterly Meeting.	"
2208	JPL Document, Oct. 20, 1961, Minutes of Briefing on the Occasion of the visit of U. S. Senator Robert S. Kerr, and James E. Webb October 3, 1961.	"
2209	Interview with Bud Schurmeier, Ranger, September 24, 1970.	"
2210 a + b	Memorandum To: General Ostrander, Dr. Silverstein, Mr. Abbott Subject: Program Management System, January 10, 1961, Ground rules. Implementation of NASA Program Management System.	"
2211	Notes of meeting with Mr. Sternberg, RCA, 7-27-62, Subject: (More sensitive target materials couldn't be used in the vidicon tube)	"
2212	Reprint from VIIIth International Astronautical Congress, Barcelona 1957, "Recovery of a Circum-Lunar Instrument Carrier" by Carl Gazley, Jr., and David J. Masson, [Austria: Springer-Verlag-Wien, 1958]	"
2213	OM, To: SM/Director, Manned Flight Experiments From: S/L Director Lunar & Planetary Programs, Subject: Report on Science Training for Astronauts, Space transportation systems must be developed to accommodate our first-rate scientists, December 8, 1966	"
2214	<del>Reprint article</del> , "Agreement Between DOD and NASA Regarding Transfer of Records, Property, Facilities and Civilian Personnel of Project Vanguard,"	"
2215	NRL Notice 5400, U.S. Naval Research Laboratory, Washington, D.C. From: Director, TO: Distribution, Subject: Transfer of Project Vanguard to NASA, December 4, 1958.	"
2216	Telephone Interview, Oran Nicks, July 13, 1971, Subject: Early days in office of Space Flight Programs.	"
2217	J. D. Burke, Lunar Program, 1963.	"
2218	Interview with Clifford I. Cummings, August 19, 1971 Subject: JPL Ranger and Lunar program activities in the early 1960's.	"
2219	M. A. Piroumian, <sup>D. Stelma</sup> Papers on Investigation of Ranger VI Failure 1964, photographs.	"
2220	Report, by Army Ballistic Missile Agency, Redstone Arsenal, Alabama A Lunar Exploration Program Based Upon Saturn-Boosted Systems, February 1, 1960, Report No. DV-TR-2-60	Shelf



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No.	Item	Location
2221	Chart, Ranger Launch-To-Injection Sequence, n.d.	Files
2222	Associated material on PIONEER-ABEL lunar flights, 1958-1960	Files
2223	<u>History of Atlas Able-5A Florida Operations.</u> <del>October</del> 1960	"
2224	<u>Lunar and Deep Space Programs</u> , G. F. Schilling, Chief Astronomy and Astrophysics Programs, 14 Sept. 1959.	"
2225	Letter, NASA-GSFC, Tracking and Data Systems, Operations Division, Atlas-Able 5 (Lunar) NASA P-30, P-31)	"
2226	Letter, Advanced Research Projects Agency, Washington 25, D.C. to Commanding General, Army Ballistic Missile Agency, Huntsville, Alabama, ARPA Order 1-58, Mar.27,58. Proceed with objectives of launching four space vehicles, Juno I, & II.	"
2227	Telephone Interview with Robert Jastrow, October 29, 1971.	"
2228	News Release, Department of Defense, Office of Public Information Washington, D.C. Secretary McElroy announces new space programs. March 27, 1958.	"
2229	Air Force Service Release No. 1303. Space Programs Revealed, at given moon probe role, 28 March 1958.	"
2230	Letter from Advanced Research Projects Agency, Washington, D.C. To Commanding General, Ballistic Missiles Div., ARDC, Los Angeles, Ca. re: Projects One & Two. Arpa Order #2-58 and 3-58. March 27, 1958	"
2231	NASA Circular, Organizational Changes, NASA Headquarters, No. 48, Ref. 2-1, December 29, 1959. Announcing establishment of new technical program office in NASA Headquarters as of January 1, 1960.	"
2232	Document, "Proposed Development Plan for Able 3-4", n.d. STL.	"
2233	Telephone Interview with Rear Admiral John E. Clar, USN (Ret.) November 1, 1971. (Clark was ARPA Deputy Director in 1958) "Beat the Russians" in lunar exploration.	"
2234	<u>Geochemical Exploration of the Moon and Planets</u> , Adler-Trombka, with 129 figures. Volume 3.	JPL Library 523.01 A237
2235	Telephone Interview with Herbert York, December 17, 1971-- desire to beat Russians in space.	Files

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No.	Item	Location
2236	Telephone interview with G. Schilling, Rand. At that time Chief of Astronomy and Astrophysics Programs. Space Science at OSFD split into two pieces. Townsend and Jastrow went to GSFC when it opened later in 1959. During this period OSFD had all of NASA's operational activities in space, manned and unmanned. Interview December 6, 1971.	Files
2237	Document, <u>1958 NASA/USAF Space Probes (Able-1), Final Report, Volume 1. Summary, Space Technology Laboratories, Inc.</u> Prepared for Air Force Ballistic Missile Division, Headquarters ARDC, under Contract AF 04(647)-205, 18 February, 1959, pp. 1-67.	Files
2238	Document, <u>1958 NASA/USAF Space Probes, (Able-1), Final Report. Volume 2, Payload and Experiments.</u> Prepared for Air Force Ballistic Missile Division, Headquarters ARDC, under Contract AF 04(647)-205, 18 February, 1959.	Files
2239	NASA Circular No. 73, Membership of Space Sciences Steering Committee and Subcommittees. (See Lunar and Planetary Subcommittees. Reference 37-1-2, May 27, 1960.	Files
2240	JPL Memo from C. I. Cummings to J. D. Burke, "Ranger Follow-On, discreet, July 5, 1961.	Files
2241	JPL Memo from C. I. Cummings to T. W. Candee. "Letter Contract No. 950137, Ranger Follow-On TV Mission, September 11, 1961 with attachment dated August 17, 1961.	Files
2242	JPL Memo from Raymond L. Heacock to C. I. Cummings, "Ranger Follow-On TV System, JPL Discreet, June 28, 1961.	Files
2243	NASA Master Plan for Space Launches, May 25, 1961.	Files
2244	<u>Science Digest</u> , "The Astronomy Story," Scientists argue: What <u>IS</u> the moon made of? Gerard Kuiper, Thomas Gold, Eugene Shoemaker, and Harold Urey, pp. 10-16, October 1965, by Bruce H. Frisch.	Files
2245	Memorandum for Files, October 6, 1960, "First Meeting of Working Level Group on Sterilization, 1) Letter from Silverstein to Pickering requesting Hobby to establish group - July 11, 1960; 2) Letter from Pickering to Silverstein assigning Hobby to organize and lead the group, July 22, 1960. Memo to Dr. T. Keith Glennan from Dr. Clark T. Randt, Director, Office of Life Science Programs, "Decontamination and Sterilization of Spacecraft.	Files
2246	Taped Interview, Gordon P. Kautz and R. C. Hall, Ranger History, December 17, 1971.	Files
2247 a	Maj. Gen. Ostrander, Letter, /NASA Headquarters to Dr. Wernher von Braun, Director, George C. Marshall Space Flight Center, Huntsville, Alabama. Continued discussions between NASA and AF personnel to establish working procedures for the NASA Agena Program. Aug. 3, 1960.	Files
2247 b	Letter, as above, with attachment, Management Organization and Procedures, 30 July, 1960.	Files

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No.	Item	Location
2248	TWX ARDC (RDGN), Andrews AFB, Washington, D.C to Major General Don R. Ostrander, Director, Launch Vehicles Programs NASA, Washington, D.C. ARDC decrying NASA-Air Force operating agreement - addressing one of its own in foreign territory. July 16, 1960.	Files
2249	Daily Bulletin, Headquarters, Air Force Ballistic Missile Division Files Air Force Unit Post Office, L.A. 45, Calif., April 12, 1960, No. 71. Effective immediately, the AFBMD NASA/AGENA B Directorate is established under the Deputy Commander for Space Programs. The acting Director is Major John G. Albert.	Files
2250	Memorandum from Richard E. Horner, Associate Administrator, to General Ostrander, Dr. Silverstein (n.d.) concerning periodic meetings of top level management of Centers and Headquarters staff offices directly involved in space exploration programs.	Files
2251	Letter, AAH, Dr. E. M. Emme, NASA Historian, from DHA-6/Chief, Visual Aids Branch, Stephen A. Saliga, subject: Naming the First "PIONEER" Spacecraft, April 13, 1972, with attachment letter to S. A. Saliga from R. M. Cram, Major General, The Adjutant General, State of Vermont, Office of the Adjutant General, Camp Johnson, Winooski, 6 February 1970.	Files
2252	Letter, General Ostrander from Dr. A. J. Kelley, subject: NASA-USAF Relations on Agena, 24 October 1960.	Files
2253	Memorandum to General Ostrander, Mr. Hyatt, Mr. Snyder, Lt. Cdr. Kelley and Cdr. Schubert, Subject: AFBMD Reaction to the NASA Proposed Agena Management Arrangements, 12 August, 1960.	Files
2254	Memorandum, General Ostrander from A. J. Kelly, subject: Earliest Agena Launch Date, 27 May, 1960.	Files
2255	Memorandum for Record from Abraham Hyatt, Deputy Director, Launch Vehicle Programs, NASA Headquarters, Washington, D.C., subject: Agena B Negotiations, August 5, 1960.	Files
2256	Memorandum to Dr. A. Silverstein from Cdr. W. Schubert, subject, Agena Program Management, 15 January 1960.	Files
2257	Telegraphic Message to AF Ballistic Msl., Attention: Maj. Gen. O. J. Ritland, Commander, from D. R. Ostrander, Maj. General, USAF - Director, Launch Vehicle Programs, concerning conference with representatives of BMD and BMC to discuss Management Relationships and Contractual Arrangements on Agena-B and Centaur-Saturn Upper Stage Programs.	Files

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No.	Item	Location
2258	Letter, H. J. Brown, Vice President and Gen. Manager, Lockheed Aircraft Corp., Missiles and Space Div., Sunnyvale, Cal., from Major General, USAF., D. R. Ostrander, Director, Launch Vehicle Programs, concerning NASA/Agena price proposal. September 30, 1960.	Files
2259	Letter Lt. Gen. Bernard A. Schriever, USAF, Commander, Air Research and Development Command, Andrews Air Force Base, Washington 25, D.C., from Maj. Gen. Don R. Ostrander. Management structure of the NASA Agena B program, August 3, 1960.	Files
2260	Letter, Maj. Gen. O. J. Ritland, Commander, AF Ballistic Missile Division, Air Force Unit Post Office, Los Angeles, 45 California, from D. R. Ostrander, Maj. General, USAF, Launch Vehicle Programs, concerning BMD meeting 1 March 1960 on the Agena B Program, August 3, 1960.	Files
2261	Memorandum to Associate Administrator from Don R. Ostrander, Major Gen., USAF., Director, Launch Vehicle Programs, subject, Agena Program, Plans and Schedules, 26 May 1960.	Files
2262 a	Memorandum to R. E. Horner from Gen. Ostrander, subj: Agena-B Coordination Board, April 29, 1960.	Files
b	Memo to Director SF Programs, Director, LV Programs from R.E.Horner.	
2263	Letter, Lt. Gen. B. A. Schriever, Commander, Air Research and Development Command, United States Air Force, Andrews AF Base, Washington 25, D.C., from Richard E. Horner, Associate Administrator, concerning results of recent NASA/Army agreements in which Dr. von Braun's group is being transferred to NASA. March 21, 1960.	Files
2264 a	Letter, Lt. Gen. Bernard A. Schriever, Commander, ARDC, Andrews Air Force Base, Washington 25, D.C., from Richard E. Horner, Associate Administrator, regarding conference at AFBMD on 1 March 1960 to discuss management structure of the NASA Agena B program and the Centaur program. March 18, 1960.	Files
b	Attachment, Results of Centaur-Agena Management Conference 1 March 1960.	
2265	Memorandum, Abraham Hyatt, Deputy Director, Launch Vehicle Programs, NASA Headquarters, from Don R. Ostrander, Major Gen., USAF., Director, Launch Vehicle Programs, stating a summary of events, plus a few ideas for the future., i.e detailed breakdown of the organization; selection for key positions. December 31, 1959.	Files
2266	TWX to Marshall Space Flight Center, Huntsville, Ala. from JPL (for Duerr from J.D.Burke, Ranger Project Mgr.) Comments from JPL re the LMSD Interface Situation, December 20, 1960.	Files
2267a	IOM from J.H.Gerpheide/H.J.Margraf to J.D.Burke, C.W.Cole, H.M.Schumaker, transmitting report concerning Ranger/Agena interface situation, December 20, 1960.	Files
2267b	[JPL] Report To JPL Management on Ranger-Agena Interface, prepared by J.Q.Spaulding and F.A.Goodwin, n.d.	Files
2268	LMSC Document, <u>Ranger Survey Meeting</u> , 27 November 1961.	Shelf

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	<u>Item</u>	<u>Location</u>
2269	JPL Document, <u>NASA/AGENA Program Presentation, 1 October, 1962</u>	Shelf
2270a	NASA letter from T.J.O'Keefe, Office of Reliability & Quality Assurance to Brooks Morris, JPL., forwarding final report of LMSC recent review, dtd March 16, 1962	Files
2270b	Copy of Review of Reliability and Quality Assurance Programs of Lockheed Missiles & Space Company - NASA Agena-B vehicles.	Files
2271	LMSC letter from H.T.Luskin, Director, Medium Space Vehicles Programs, to Mr. Robert C. Cook, Chairman of Quality Assurance and Reliability Panel, NASA, Geo.C.Marshall SFC, Huntsville, Ala. subj: Progress Report, Lockheed Corrective Action on Agena Vehicles for NASA Programs, dtd August 3, 1962.	Files
2272 a	Letter John G. Albert, Major USAF, Chief, Program Integration Division, Headquarters, Space Systems Division, AF Systems Cmd. U.S. Air Force Unit Post Office, Los Angeles 45, CA. to Mr. Duerr, Marshall Space Flight Center, Huntsville, Alabama, subject, Reliability Improvement on Ranger 6 Booster, dtd November 9, 1962	Files
2272 b	Advance Copy, General Dynamics/Astronautics, San Diego 12, Calif. Subj: Contracts AF04(647-290 and AF 04 (694)-196 (Item 2) Reliability Improvement Program, Missile 2500D, TCP 8076, regarding proposed plan to insure satisfactory Booster Flight for Ranger 6.	Files
2273 a	Letter from Friedrich Duerr, Agena Systems Manager, NASA/Geo.C. Marshall SF Center, Huntsville, Alabama to James D. Burke, JPL, subj: Ranger 6 Atlas/Agena Reliability Improvement Plan, dtd November 29, 1962.	Files
2273 b	Attachment, letter from Morton Goldman, Aerospace Corporation, subj: Aerospace Evaluation Team Report, Atlas "D" Space Booster 250D, dtd 14 January, 1963.	Files
2273 c	Attachment No. 1, Missile 250D Irregularity List Composite Test FC-CO-0400008-002, conducted 13 December 1962.	Files
2274	JPL Document, Minutes of Meeting of NASA, MSFC, SSD and JPL Concerning Ranger and Mariner Program Plans at JPL On 23 and 24 January, 1963, prepared by H. Margraf/G.Haddock.	Files
2275 a	JPL Letter from H.M.Schurmeler, Ranger Project Manager, to Dr. S.C.Himmel, Agena Systems Manager, NASA, Lewis Research Center, Cleveland, Ohio, sub: Ranger Project Recommendations for Improvement of the Reliability of the Atlas-Agena Launch Vehicle, dtd March 11, 1963.	Files
4b		

*Memo to Schurmeler from B.T. Notten*

## SOURCE LIST No. 2

## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2276	TWX from JPL to DR. S.C.Himmel, Agena Systems Manager, NASA/Lewis Research Center, Cleveland, Ohio, from H. M.Schurmeler, Ranger Project Manager, regarding detailed design reviews for each of the four systems comprising the Ranger project. April 22, 1963.	Files
2277	JPL Memorandum from H.M.Schurmeler to Distribution, subj: 1) Ranger Block III Launch Vehicle System Review; 2) Appointment of JPL Review Team, dtd 24 May 1963.	Files
2278 a.	JPL Letter from H.M.Schurmeler to Dr. S.C.Himmel, NASA, subj: Ranger Block III Launch Vehicle System Review Meetings at Lewis on June 4-6, 1963.	Files
2278 b.	Attachment No. 1, Topics and Depth of Detail Desired for RA III Launch Vehicle System Review Meetings.	Files
2279	TWX from S.C.Himmel, NASA/Lewis Research Center, Cleveland, Ohio to H.M.Schurmeler, Manager, Ranger Project, JPL, subj: Ranger Block III Launch Vehicle System Review, dtd May 27, 1963.	Files
2280	Lewis Research Center, Ranger Block III Vehicle Review Agenda, Tuesday, June 4, 1963.	Files
2281	Report (JPL), RA III Launch Vehicle Review, Report of the JPL Review Board by Harry J. Margraf, 7-1-63.	Files
2282	USAF-NASA Memorandum of Agreement, NASA Office of Space Sciences, Agena Launch Vehicle Program, dtd 9 August 1963.	Files
2283	Letter from James P. Cann, Lt. Col. USAF, Deputy Director, SLV, Headquarters, Space Systems Div. AF Systems Command, U.S.Air Force, dtd Sept. 11, 1963, subj: AF/NASA Launch Services Meeting, 20 August 1963.	Files
2284	Memorandum of Understanding for USAF/NASA Coordination Groups, from S.C.Himmel, Manager, Agena Project and Robert W. Hoffman, Col. USAF, Headquarters, Space Systems Div. AF Systems Command, U.S.Air Force, dtd 28 August 1963.	Files
2285	Memo. No. 204 from W.H.Pickering, JPL Director, to All Personnel, subj: Ranger Block III Flights, regarding postponement of the next two flights, dtd October 30, 1963.	Files
2286	Memo from R.J.Parks, JPL to Ranger, Mariner, Surveyor Personnel, subj: Ranger Block III Flights regarding postponement of RA flights 6, 7; RA 8 & 9 on schedule, dtd October 31, 1963.	Files
2287	Memorandum of Agreement Between NASA/LeRC, NASA/GSFC/FPB, and the USAF PTSO/AFQC for NASA Atlas, Atlas/Agena, dtd November 19, 1963.	Files
2288	Letter from Dr. Seymour C. Himmel, Ranger Launch Vehicle System Mgr. Lewis Research Center, Cleveland, Ohio to H. Margraf, subj: Booster Steering for Ranger Block III, dtd January 7, 1964.	Files

## SOURCE LIST No. 2

## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2289	Letter from S.C.Himmel, Manager, Agena Project to H.M.Schurmeler Ranger Project Manager, JPL, subj: Report on Ranger 6 Vehicle Procurement Major Project Milestones, dtd January 7, 1964.	Files
2290	Letter from Homer E. Newell, Director, Office of Space Sciences to Professor Harold C. Urey, University of California, regarding continuation as an experimenter associated with the television experiment on Ranger, dtd 25 April 1963.	Files
2291	Letter from Harold C. Urey to Dr. Homer E. Newell, NASA Headquarters, regarding prospective landing positions on the moon, dtd June 19, 1961.	Files
2292	Letter from Homer E. Newell to Dr. Harold C. Urey, University of California, San Diego, concerning Ranger Photographic Experimenter Team, dtd February 9, 1965.	Files
2293	Letter from Harold C. Urey, University of California, to Dr. Homer E. Newell concerning photographic survey of the moon, dtd April 11, 1963.	Files
2294	Letter from Harold C. Urey to Dr. Homer E. Newell, Director, Office of Space Sciences, NASA, Washington, concerning photographic observations of the moon and what can be done with gamma ray data and seismometer data. November 21, 1962.	Files
2295.	Letter from Harold C. Urey to Dr. Hugh L. Dryden, Deputy Administrator NASA, Washington, stating disappointment of the Ranger 5 shot, dtd October 19, 1962.	Files
2296	Letter from Homer E. Newell, Director, Office of Space Sciences, to Prof. Harold C. Urey, School of Science & Engineering, University of California, regarding photographs of the moon and balance between types of experiments, dtd January 9, 1963.	Files
2297	Letter from Homer E. Newell to Dr. Harold C. Urey, University of California, concerning reviewing of roles of experimenters in all programs, dtd April 2, 1963.	Files
2298	Letter from Hugh L. Dryden, Deputy Administrator, to Dr. Harold C. Urey, University of California, regarding next series of Rangers which will emphasize successful operation of the spacecraft in achieving high resolution photographic data, dtd November 21, 1962.	Files
2299	Letter from Homer E. Newell to Dr. Harold C. Urey, University of California, regarding the question as to why space environment experiments were being carried on Ranger missions, dtd Nov. 15, 1962.	Files
2300	Letter from Harold C. Urey to Dr. Homer E. Newell, NASA, concerning TV photography on future Ranger shots, dtd October 24, 1962.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2301	Memo from Don R. Ostrander, Director, Launch Vehicle Programs, to Dr. A. Silverstein, subj: Reorientation of Agena B Launch Vehicle Contract, dtd August 9, 1960.	Files
2302	Memo from Albert J. Kelley, Deputy Chairman, Agena B Coordination Board, to W. A. Fleming, Chairman, Agena B Coordination Board, subj: Agena B Launch Vehicle Requirements, dtd August 5, 1960.	Files
2303	Memo from William A. Fleming, Chairman, Agena-B Coordination Board to A. J. Kelley, Deputy Chairman, Agena-B Coordination Board, subj: Agena-B Launch Vehicle Requirements, dtd August 3, 1960.	Files
2304	Letter from Don R. Ostrander, Director, Launch Vehicle Programs, to Wernher von Braun, Director, NASA, Geo.C.Marshall SF Center, Huntsville, Alabama concerning funding plans and contractual Implementation of Agena-B Program, dtd June 7, 1960.	Files
2305	Minutes, NASA Space Exploration Program Council, and associate memorandums, etc.	Shelf
2306	Memo from NASA Headquarters, Edgar M. Cortright, Deputy Director, Office of Space Sciences, to Dr. W. von Braun, George C. Marshall SFC, dated April 16, 1962, subj: Agena Launch Responsibility at PMR, including Functions and Authority and attachments.	Files
2307	NASA Headquarters letter to Dr. Wernher von Braun, Director, George C. Marshall SFC, August 11, 1961, including Tentative Agena Vehicle Launch Schedule.	Files
2308	Taped interview with James E. Webb, R. C. Hall, subj: Ranger JPL History, October 26, 1972	Files
2309	Taped interview, Robert C. Seamans, Secretary of the Air Force, and R. Cargill Hall, subj: Ranger JPL History, October 26, 1972	Files
2310	Memorandum for Mr. Webb from Dryden, subject: Current Status of Certain Programs Including Ranger Follow-On Program, dated July 31, 1962.	Files
2311	Minutes, Twelfth Meeting Space Science Board, Graduate Research Center of the Southwest, Dallas, Texas, May 13 & 14, 1963. Including attendees, and introductory remarks.	Files
2312	Letter from Hugh L. Dryden, Deputy Administrator, to Dr. Philip H. Abelson, Director, Geophysical Laboratory, Washington, concerning analyses of known facts on environmental conditions on the Moon, Mars and Venus. March 10, 1961.	Files



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<u>No.</u>	<u>Item</u>	<u>Location</u>
2313	Letter from Dr. Homer E. Newell, Associate Administrator for Space Science and Applications, to Robert Seamans, Associate Administrator, subj: Ranger B Status Review, July 10, 1964. Concerning flight readiness of the spacecraft and launch vehicle.	Files
2314	Memorandum from Oran W. Nicks, SL Director, Lunar & Planetary Programs, to S/Associate Administrator for Space Science & Applications, subj: Report on Ranger VII Presentation to International Astronomical Union (I.A.U.) 8 September 1964.	Files
2315	Priority TWX from Earl D. Hilburn, Acting Associate Administrator, NASA, to Dr. W. H. Pickering, Director, JPL, August 25, 1964, concerning release via the mass media.	Files
2316	Letter from Homer E. Newell, Associate Administrator for Space Science & Applications to Dr. Harry H. Ness, Chairman, Space Science Board, August 25, 1964, concerning Ranger VII press conference at NASA Headquarters.	Files
2317	Memorandum (Personal and Confidential) from K/Earl D. Hilburn to AA/Dr. Seamans, subj: Suggestions relative to the future handling of the Ranger/Surveyor/Mariner Projects, March 20, 1964.	Files
2318	Memorandum from Newton W. Cunningham, Chief, Ranger Program, to SL/Staff, subject: Ranger Program Monthly Review - to keep SL personnel informed of progress of Ranger program. September 30, 1963.	Files
2319	Announcement, "Ranger Application to Mars Exploration," concerning proven spacecraft design for Ranger 7. n.d.	Files
2320	Announcement, "Preliminary Plan for the Long-Range Follow-On Analysis and Interpretation of the Ranger Pictures," n.d.	Files
2321	Announcement, "Ranger C and D Target Selection," January 11, 1965.	Files
2322	Announcement, "Foreign Distribution of Ranger VII Photos," including Draft Press Release, October 1964.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2323	Memorandum to AA/Associate Administrator from Homer E. Newell, Associate Administrator for Space Science and Applications, subject: Actions Taken by OSSA In Response to the "Final Report of the Ranger VI Review Board," As a result of the failure of Ranger VI. July 25, 1964.	Files
b	Memorandum to Homer E. Newell from Oran W. Nicks, Director Lunar & Planetary Programs, subject: Summary of Actions Taken In Response to the Detailed Recommendations of the Ranger VI Review Board, July 23, 1964.	Files
c.	Report of OSSA Buy-Off Committee on Ranger B Spacecraft Preshipment Meeting of June 15-16, 1964.	Files
2324	Announcement, "Projectiles for RANger Spacecraft," concerning modification of spacecraft. 1964.	Files
2325	"Contributions of the Ranger Program," concerning achievements since 1959, and observations concerning lunar surface. March 24, 1965.	Files
2326	<u>Journal of Geophysical Research</u> , "A Lunar Seismic Experiment, Frank Press and Phyllis Buwalda and Marcia Neugebauer, October 1960. pp. 3097-3105. (Vol.65, No. 10)	Files
2327	Memorandum to Mr. Webb from Franklyn W. Phillips, subject: Review of Ranger Program by PSAC, concerning concern by scientists regarding the way in which the Ranger program has been handled. June 11, 1962.	Files
2328	NASA letter from Hugh L. Dryden, Deputy Administrator to Dr. Evan H. Walker, University of Maryland. The subject of scientists going to the moon for research. October 16, 1952.	Files
2329	Memorandum to Oran W. Nicks from Joseph F. Shea, Deputy Director, Office of Manned Space Flight, subject: Plans for Unmanned Lunar Orbiter Development, October 23, 1962.	Files
2330	Letter to Dr. Harold C. Urey, University of California, San Diego, from Hugh L. Dryden, Deputy Administrator, regarding Ranger failures. November 14, 1962.	Files
2331	Memorandum for Record, from Oran W. Nicks, Director, Lunar & Planetary Programs, subject: Ranger Project Activities Discussion on 11 October 1962, dated 15 November 1962.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2332	Letter to Dr. Harold C. Urey, School of Science & Engineering, University of California, San Diego, from Hugh L. Dryden, regarding overcoming difficulties encountered with Ranger 5 shot. November 21, 1962.	Files
2333	<u>The Military Engineer, November-December, 1962, "Engineering Aspects of the Ranger Project," by J. D. Burke, pp. 404-405.</u>	Files
2334	Memorandum for the Record by the Associate Administrator, Robert C. Seamans, Jr., subject: Important factors relating to the selection of Northrop Corporation as the Ranger Contractor, March 7, 1963.	Files
2335	Letter from Harold C. Urey, University of California, San Diego, to Dr. Homer E. Newell concerning experimenter problem in connection with television of moon's surface. April 5, 1963.	Files
2336	Letter from A. R. Hibbs, Chief, Arms Control Study Group, JPL, to Homer E. Newell, concerning experimenter on lunar photographic experiment for Ranger series. April 11, 1963.	Files
2337	Letter from Homer E. Newell, Director, Office of Space Sciences, to Professor Harold C. Urey, concerning experimenter associated with television experiment on Ranger, April 25, 1963.	Files
2338	Memorandum from Newton W. Cunningham, Chief, Ranger Program, to Oran W. Nicks, Director, Lunar & Planetary Programs, subject: Role of Ranger TV Principal Investigator, July 9, 1963.	Files
2339	Memorandum from Newton W. Cunningham, Chief, Ranger Program, to Oran W. Nicks, Director, Lunar & Planetary Programs, subject: Role of Ranger TV Principal Investigator, July 10, 1963.	Files
2340	Memorandum from Newton W. Cunningham, Chief, Ranger Program, to Oran W. Nicks, Director, Lunar & Planetary Programs, subject: Role of Ranger TV Principal Investigator, July 10, 1963.	Files
2341a.	Memorandum from Newton W. Cunningham, to Homer E. Newell, subject: TV Experimenters for Ranger Block III, July 19, 1963.	Files
b.	NASA letter from Homer E. Newell to Dr. Gerard P. Kuiper, Director, Lunar & Planetary Laboratory, U. of Arizona - designating Kuiper as Principal Investigator for television experiment, July 19, 1963	Files
c.	NASA letter from Homer E. Newell, to E. A. Whitaker, Lunar & Planetary Laboratory, U. of Arizona, inviting Whitaker as a co-experimenter on the television system planned for Ranger Block III missions. July 19, 1963.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2342	Summary of Redesign Since Ranger VI, Items 1-15, n.d.	Files
2343	NASA letter from Newton W. Cunningham to Homer E. Newell subject: TV Experimenters for Ranger Block III, July 19, 1963.	Files
2344	Memorandum of Agreement, Space Science for Ranger, signed by N. W. Cunningham, H. M. Schurmeier and Dr. G. Kulper, September 12, 1963.	Files
2345	Memorandum from Homer E. Newell to Oran W. Nicks, subject: Payload Approval for Initial Ranger Block V Missions, dated September 18, 1963.	Files
2346	NASA letter from Robert C. Seamans to Dr. William H. Pickering concerning careful examinations of failures by an Independent Board to correct causes (Rangers). March 26, 1964.	Files
2347	Memo for the Record, from J. Posner (OSSA/SP, subject: Congressional Hearings on Ranger and NASA-JPL Relationships, April 21, 1964.	Files
2348	Letter from James E. Webb, NASA Administrator, to Hon. Joseph E. Karth, Acting Chairman, Subcommittee on NASA Oversight, - unwise to release recent internal investigative report on Ranger VI flight. April 23, 1964.	Files
2349	Personal letter to Hon. George P. Miller, House of Reps., from James E. Webb, concerning hearings conducted by Joe Karth on Ranger/JPL/NASA problems, successes and failures. May 4, 1964.	Files
2350	NASA memorandum to Associate Administrator from Earl D. Hilburn subject: "Buy-Off" of Ranger-7 at JPL, June 17, 1964.	Files
2351	NASA News Release, Presentation on Ranger VII to Members of Congress, 5 August 1964.	Files
2352	a. Letter from James E. Webb to Dr. Harold Brown, Director of Defense Research and Engineering, Washington, D.C., concerning Ranger VII successful flight. August 19, 1964.	Files
	b. Letter from Harold Brown, Director of Defense Research & Engrg., Washington, D.C. to Hon. James E. Webb, Administrator, NASA, offering congratulations for the Ranger VII successful flight, August 6, 1964.	Files
2353	Priority Telecon from Earl D. Hilburn, Acting Associate Administrator, to Dr. W. H. Pickering, Director, JPL - first major discussion of Scientific results at Hamburg (Ranger). August 25, 1964.	Files

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No.	Item	Location
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2354	a: Memorandum from Oran W. Nicks, Director, Lunar & Planetary Programs, to Director, Apollo Program, Office of Manned Space Flight, subject: Definition of Apollo Area of Interest, February 1, 1965.	Files
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	b: Memorandum from Samuel C. Phillips, Major General, USAF, Director, Apollo Program, to Director, Lunar and Planetary Programs, subject: Definition of Apollo Area of Interest, February 8, 1965.	Files
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2355	Telegraphic Message from Homer E. Newell, NASA, to Dr. Gerard P. Kuiper, Hilo, Hawaii, and to Cognizant Experimenters, Cognizant Ranger project personnel at JPL, and Rep. from Space Science Board to meet for conference on firm decision regarding launching of Ranger 8. (Target Selections)	Files
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2356	Letter from H. H. Hess, National Academy of Sciences, to Dr. George E. Mueller, Office of Manned Space Flight, NASA, regarding changing impact points of the Rangers, February 2, 1965.	Files
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2357	a: NASA announcement, Ranger 8 Lunar Target Selection Review, Invited Participants, February 6, 1965.	Files
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	b1 Agenda	"
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	c: Ranger 8 Target Selection Activities to Date	"
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2358	a: Memo from Homer E. Newell to Associate Administrator, for Manned Space Flight, subject: Ranger 8 Target Selection, February 11, 1965.	Files
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	b: Memorandum from Oran W. Nicks to Associate Administrator, Space Science & Applications, subject: Ranger 8 Target Selection Review and Final Recommendations, February 9, 1965.	Files
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	c: NASA Attachment A, Ranger 8 Lunar Target Selection Review, Invited Participants, February 6, 1965.	Files
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	<del>Memorandum from Oran W. Nicks to Associate Administrator, Space Science and Applications, subject: Ranger D Site Selection, March 10, 1965.</del>	Files
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*same as 2-1517*

2360	a: Letter from Donald U. Wise, Franklin and Marshall College, Lancaster, Pennsylvania, to Dr. Urner Liddel, NASA, concerning target site of Alphonus for Ranger 9, March 18, 1965.	Files
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	b: Letter from Urner Liddel to Dr. Donald U. Wise regarding site selection for Ranger 9 and meeting at NASA, February 26, 1965.	Files
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	c: Letter from Donald U. Wise to Dr. Urner Liddel, concerning philosophy of sending Ranger cameras to flatland versus highland regions, February 24, 1965.	Files
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<u>No.</u>	<u>Item</u>	<u>Location</u>
2361	Telecon from Earl D. Hilburn, Acting Associate Administrator, to DR. W. H. Pickering - offering congratulations to a most successful program, March 24, 1965.	Files
2362	NASA blank letter from Homer E. Newell, enclosing copies of Ranger VIII and IX lunar photographic data sets, July 29, 1966.	Files
2363	Memorandum for the Secretary of Defense, from Dwight D. Eisenhower, The White House, approving the advanced space projects. March 24, 1958.	Files
2364	Memo from Roy W. Johnson, Advanced Research Projects Agency, for The Secretary of the Army, stating that the Army Ballistic Missile Agency could make an important contribution to the work of ARPA. March 27, 1958.	Files
2365	a: Letter from Roy W. Johnson to Commanding General, Army Ballistic Missile Agency, stating approval to proceed with objectives of launching four space vehicles: Juno, I, II. March 27, 1958.	Files
	b: Letter from Roy W. Johnson to Commanding General, amending to restate scope of Project One, May 2, 1958.	Files
2366	Memorandum for the Secretary of the Air Force from Roy W. Johnson, Director - It is not intended to acquire laboratories which will be operated by ARPA. March 27, 1958.	Files
2367	Memorandum from Roy W. Johnson for the Commanding General, U.S. Army Ordnance Missile Command, subject: Presidential Approval of ARPA Projects, April 17, 1958.	Files
2368	a: Letter from Donald F. Hornig, Special Assistant to the President for Science and Technology, to Eugene M. Emme, NASA Historian, concerning 1960 Report of the PSAC Ad Hoc Panel on Man-In-Space, July 12, 1968.	Files
	b: The President's Science Advisory Committee, Executive Office Building, Washington, D.C., "Report of Ad Hoc Panel on Man-In-Space, November 14, 1960.	Files
2369	Arpa Order No. 2-58, Amendment No. 5, to Commander, Air Research and Development Command, Andrews AF Base (signed by Roy W. Johnson) October 6, 1958. (Responsibility of Order 10783 transferred to NASA)	Files
2370	<u>U.S. Army Ordnance Missile Command, "Development and Funding Plan for Project One, ARPA Order NR.1-58 as Amended (U), 15 May 1958.</u>	Files
2371	Revised Final Script, JPL 693, "Motion Picture Script for Analyses and Summary of the Ranger VII, VIII, and IX Television Pictures, W. J. Hardy, June 21, 1967.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2372	<u>Technical Report, Ranger Retromotor (U), Final Report,</u> prepared by Spacecraft Projects Department, Ford Motor Company, Space and Weapon Systems, Publication No. C-1882, 5 November 1962.	Shelf
2373	TWX to Maj. Gen Don R. Ostrander, from W. H. Pickering, concerning problem of Marshall participation in the Agena and Centaur programs, June 13, 1961.	Files
2374	Range Use and Support Agreement between the Launch Operations Directorate, George C. Marshall Space Flight Center, NASA, and the Air Force Missile Test Center, Air Force Systems Command, USAF, at Patrick Air Force Base, Florida, July 17, 1961.	Files
2375	NASA Memo to attached list from SD/Deputy Director, Edgar M. Cortright, subject: Launch Schedules, August 30, 1963.	Files
2376	JPL Document, <u>Minutes of the First Meeting of the Ranger Block V Mission Analysis Panel, held September 19, 1963,</u> V. C. Clarke, Jr. Chairman.	Files
2377	<u>Proposal for a Ranger V Lunar Gamma Ray Experiment,</u> JPL Investigator, Albert E. Metzger, No. SC 6759, May 31, 1963.	Files
2378	JPL Document, <u>Radar Experiment Proposal for Ranger Block 5,</u> W. E. Brown, Jr., May 29, 1963.	Files
2379	Caltech Document, Geismological Laboratory, Proposal to NASA for A Passive and/or Active Seismic Experiment for <u>a Ranger Capsule Type Mission, Frank Press, Robert L.</u> <u>Kovach, Francis E. Lehner, April 30, 1963.</u>	Files
2380	NASA letter from Homer E. Newell, Director, OSS, to Dr. Wm. H. Pickering, JPL, approving following experiments and Principal Investigators for flight on Rangers 10 & 11, September 18, 1963.	Files
2381	<u>Design Review, Ranger Lunar Facsimile Capsule, Phase I,</u> Ford Motor Company Aeronutronic Division, 25 March 1963.	Shelf
2382	NASA letter from Homer E. Newell, Director, OSS, to Dr. E. J. Smith, concerning elimination by NASA of all non-visual experiments from Rangers 6-9. March 29, 1963.	Files
2383	JPL letter from H. M. Schurmeler to Newton W. Cunningham, NASA Ranger Program Manager, concerning a brief review of new experiments proposed for Ranger Block IV, April 12, 1963.	Files

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## RANGER

<u>No.</u>	<u>Item</u>	<u>Location</u>
2384	JPL Evaluation Report, <u>Ranger Block IV Experiment Proposals</u> , D. Alcorn, C.F. Campen, L.J. Goforth, R.L. Heacock, T. Vrebalovich, Draft, April 12, 1963.	Files
2385	Memo from R. V. Meghreblian (JPL) to H. M. Schurmeier, subject, "Proposed Ranger Block 5 Mission Objectives," May 17, 1963.	Files
2386	Memo from R. V. Meghreblian to H. M. Schurmeier, subject: "Review of Experiments Proposed for Ranger Block V," August 5, 1963.	Files
2387	Ranger Block V Experiment Proposals, undated.	Files
2388	JPL letter from H. M. Schurmeier to N. W. Cunningham, NASA Ranger Program Chief, subject: Ranger Block 5 Experiment Recommendations. August 9, 1963.	Files
2389	JPL Memo from J. D. Burke to H.M. Schurmeier, subj: Ranger Weight Control, July 19, 1960.	Files
2390	NASA Memo for Record, from Abraham Hyatt, Dep. Director, Launch Vehicle Programs, subject: Agena B Negotiations, concerning planned payloads. August 5, 1960.	Files
2391	Letter to R. Cargill Hall from James R. Arnold, University of California, San Diego, concerning the launch of <u>Ranger 3</u> , dated August 9, 1973.	Files
2392	Letter from Frank Press, Chairman, Department of Earth and Planetary Sciences, Massachusetts Institute of Technology, to R. Cargill Hall, JPL Historian, recollecting sequence of events responsible for unsuccessful flights in 1962, July 26, 1973.	Files
2393	Folder, Lunar Capsule-Orbiter, letters and memos (JPL), 1962.	Files
2394	Aeronutronic Division, Ford Motor Co., Document, <u>Proposal for Lunar Capsule Extensions</u> , Vol. II, Specific Capsule Proposals, 5 April, 1961.	Shelf
2395	RCA Document, <u>Lunar Orbiter Capsul Final Phase-Out Report</u> , prepared for Jet Propulsion Laboratory, December 31, 1962.	Shelf
2396	RCA Document, <u>Final Report On Lunar Orbiter Capsule Study</u> , prepared for Jet Propulsion Laboratory, 31 July, 1962.	Shelf



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<u>No.</u>	<u>RANGER Item</u>	<u>Location</u>
2397	Paper, reprinted from "Vistas in Astronautics Vol. II," Pergamon Press, 1959, "The Scientific and Engineering Exploration of the Moon," by Dr. John L. Barnes, President, Systems Corporation of America.	Files
2398	JPL Memo, Report No. LPD-2, from C.I. Cummings to JPL Senior Staff, concerning telephone call to Ed Cortright re. Mission Manager and Instrumentation Support Manager concept, on November 29, 1960, dated December 1, 1960.	Files
2399	Memo from Abe Silverstein for Director, Office of Launch Vehicle Programs, subject: Operating Philosophy of Space Flight Programs Flight Mission Groups, November 14, 1960.	Files
2400	NASA Summary Minutes, Lunar Sciences Subcommittee of the Space Sciences Steering Committee, Meeting No. 7, and Joint Meeting of the Planetary and Interplanetary Sciences Subcommittee of the Space Sciences Steering Committee, Meeting No. 1, and attachments, dated August 28, 1961.	Files
2401a	George C. Marshall SF Center Memo from Kurt H. Debus to Mr. Rosenberry, subject: Mission Directors Location for Ranger and Mariner Series Spacecraft Launches from AMR, January 9, 1961.	Files
2401b	<i>Memo from Rosenberry to Debus</i>	
2402	Report from JPL C.I. Cummings to Distribution, concerning visit from Sam Snyder, Assistant Director for Launch Operations, NASA, to get acquainted with the Laboratory and Ranger spacecraft; also two problems which he wished to discuss; on January 9, 1961, dated January 10, 1961.	Files
2403	Index of Roll, 21-20, 21-21 and 21-22, from files of C.I. Cummings and J.D. Burke, JPL, 1960-1962.	Files
2404	Paper, <u>Ranger 3 Information Plan</u> , A.P. Alibrando, NASA Project Information Manager, and Christian Clausen, JPL Project Information Officer, dated January, 1962.	Files
2405	JPL Memo from H.M. Schurmeier to Distribution, subject, Headquarters Meeting on LOC Operations, August 8, 1962.	Files
2406	JPL <del>telex</del> report from J. D. Burke to Distribution, concerning meeting at LOD/AMR to discuss problem of LOC-USAF relationships for Agena launchings. Date of Occurrence, June 25, 1962, report same date.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2407	Draft, "Detailed Implementation of NASA-Agena Vehicle Project Management by JPL, October 1, 1962.	Files
2408	JPL Discreet letter to Dr. Homer E. Newell, NASA, from Brian Sparks, JPL Deputy Director, concerning comments on document entitled, "Basic Operating Concepts for the Launch Operations Center at the Atlantic Missile Range," of July 19, 1962. Letter dated August 9, 1962.	Files
2409	Release No. 62-224, "NASA Studying Ranger Failure," dated October 19, 1962.	Files
2410	Release No. 62-220, "Five New Rangers Added to Space Sciences Program," dated October 15, 1962.	Files
2411	<u>N.Y. Times</u> clipping, "5 More Rangers to be Launched," Raises Total of Moon Craft in Next 2 years to 10, by John W. Finney, October 1962.	Files
2412	Statement by Dr. W.H. Pickering concerning crash of Ranger 4 on the moon, n.d.	Files
2413	Discussions, concerning JPL Spacecraft Test Engineer, JPL Control Center MAB AE launch controls, January 18, 1961.	Files
2414	<u>Journal of Geophysical Research</u> , Vol. 67, No. 12, pp. 4878-4880, "Letters to the Editor, Gamma Rays in Space, Ranger 3," by James R. Arnold and Albert E. Metzger, November 1962.	Files
2415	News Release from NASA, 63-276, "NASA Cancels Five Follow-On Rangers, December 13, 1963.	Files
2416	Reprint from <u>Nature</u> , Vol. 204, No. 4960, pp. 766-767, "Detection of an Interstellar Flux of Gamma-Rays, November 21, 1964.	Files
2417	NASA/JPL Document, <u>Ranger VII, A Special Report</u> , August 5, 1964.	Files
2418	Office of Public Education & Information Release, "Ranger D Launch Scheduled March 21, 1965," dated March 15, 1965.	Files
2419	Office of Public Education & Information Release, concerning turn-on of spacecraft's 6 television cameras (Ranger VIII), undated.	Files
2420	Newsclip from <u>N.Y. Times</u> , "Impact, Of Ranger 7," dated August 2, 1964.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2421	JPL PIO Document, "Ranger VII Post-Impact Press Conference, JPL Auditorium, July 31, 1964.	Files
2422	NASA, Office of Legislative Affairs, Legislative Activities Report No. 156 (Vol. III), concerning Ranger VII lunar reaction shot with attachment of the <i>Congressional Record</i> with USIA research results, August 11, 1964.	Files
2423	JPL Memo from Dr. W.H. Pickering, subject: "Publicity Concerning the Laboratory," concerning critical and factual news and magazine articles, February 13, 1964.	Files
2424	<u>USAF-NASA Memorandum of Agreement, NASA Office of Space Sciences Agena Launch Vehicle Program, dated August 9, 1963.</u>	Files
2425	NASA News Release, "Ranger VII Preliminary Results Conference," 31 July 1964.	Files
2426	NASA News Release No. 65-35, "NASA Distributes Ranger VII Photos to World Scientists," February 15, 1965.	Files
2427	<u>The Christian Science Monitor, "Unmanned Moon Shots Near Finale," August 1, 1967.</u>	Files
2428	NASA News Release, "Presentation on Ranger VII to Members of Congress", August 5, 1964.	Files
2429	<u>Astronautics, July 1960, Vol. 5, No. 7, "The Shape of Tomorrow,"</u> NASA's Ranger project, already in the hardware stage, readies for missions to cislunar space, (etc.) by Clifford I. Cummings, JPL.	Files
2430	<u>NASA Current News, prepared by Office of Public Information, Ranger 7 - an indication of the press reaction, August 6, 1964.</u>	Files
2431	<u>Ranger 7 Log - Events, Time, Velocity, Altitudes, June/July, 1964.</u>	Files
2432	<u>N.Y. Times, Closeups Demonstrate Precision Reconnaissance of Moon's Surface (newsclipping) "Ranger Hits Moon and Sends Photos Seen Live on TV," March 25, 1965.</u>	Files
2433	JPL Memo from W.J. Lane to Distribution, "Ranger C (VIII) Condensed Countdown and In-Flight Sequence of Events. February 15, 1965.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2434	NASA News Release, Ranger VIII Post-Impact Press Conference, JPL Auditorium, February 20, 1965.	Files
2435	NASA News Release No. 65-96, "Ranger IX to Send World's First Live Moon Photos," March 23, 1965.	Files
2436	Paper, "Webb Notes for Cabinet Briefing on the Ranger Program," concerning the nine Ranger launches, March 25, 1965.	Files
2437	The Philadelphia Inquirer, "Moon Once Contained Lakes, Urey Tells Nobel Parley," July 10, 1967.	Files
2438	The Washington Daily News, "Did Earth Capture the Moon?" by David Dietz, July 17, 1967.	
2439	N.Y. Times, 1962, newsclipping, "Five Lunar Shots Canceled by NASA, Unmanned Landings Cut in an Economy Move, by John W. Finney, December 13, 1962.	Files
2440	NASA News Release No. 63-238, "Launch of Ranger 6 Rescheduled, October 23, 1963.	Files
2441	Time Magazine, "Science," The Fastest Camera; Precision was hardly a precise enough word to describe the rocketing spacecraft Ranger 6 as it reached for the moon. February 7, 1964, p.58.	Files
2442	a:JPL Document, "Statement of Dr. William H. Pickering, Director of JPL, before the Sub-Committee on NASA Oversight of the Committee on Science and Astronautics of the United States House of Representatives." (Ranger VI Investigations), 1964 b:Memo to Record from W. H. Pickering, April 14, 1964.	Shelf
2443	JPL Memo from B .T. Morris to H.M. Schurmeier, subject: Risk to RA-6 Flight from Atlas G. Guidance September 12, 1963.	Files
2444	Newsletter, Management Club of CIT, Vol. 11, No. 2, "Some Thoughts on Managing," by H. M. Schurmeier, JPL, dated November, 1970.	Files
2445	The New York Times, "Ranger's Man On Ground, Harris McIntosh Schurmeier," (Man in the News) July 31, 1964. Also, "Ranger 7 Nearing Its Lunar Target."	Files
2446	JPL Memo from W.H. Pickering to All Personnel, subject: Recent Publicity Regarding the Laboratory, concerning general review of Ranger project after launch of Ranger 5, dated 28 December, 1962.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2447	Interview with Geoffrey Robillard, JPL, concerning the History of Project Ranger, by R. Cargill Hall, February 27, 1974.	Files
2448	a. Teletype from Homer E. Newell, NASA Headquarters, to Dr. William H. Pickering, concerning one month's delay in launch date of Ranger B to July, dated May 12, 1964.	Files
	b. Teletype from W. H. Pickering to Homer E. Newell, NASA Headquarters, recommending an immediate decision to delay launch date of Ranger-B by one month, dated May 11, 1964.	Files
2449	Teletype from H. M. Schurmeier to N. W. Cunningham, NASA, recommending material presented at meeting to be again reviewed with respect to guidelines established, dated May 18, 1964.	Files
2450	Teletype from W. H. Pickering to Homer E. Newell, NASA, stating the Laboratory will proceed with planning for and implementation of additional testing on Ranger B, warning that this may jeopardize a successful mission in July, dated May 20, 1964.	Files
2451	Memorandum from SL/Newton W. Cunningham to Distribution, subject: Spacecraft Monitoring Activities at JPL and AMR, dated May 15, 1964.	Files
2452	Teletype from NASA Headquarters to W. H. Pickering, concerning particular items of concern: (A) test plan for RA-7 spacecraft; (B) SCR Turnon, Turnoff circuitry; (c) Backup Alternate, and (D) High power TV tests, dated May 21, 1964.	Files
2453	Teletype from W. H. Pickering to Homer E. Newell, regarding implementation of the minimum-cables Test of Ranger 7, dated May 27, 1964.	Files
2454	Teletype signed by H. M. Schurmeier to N. W. Cunningham, regarding project decision to replace Case IV with a qualified flight spare, dated May 26, 1964.	Files
2455	Congressional Record--Appendix, concerning Ranger: during Ranger hearings, Teague stepped aside to turn over acting chairmanship to Congressman Joseph E. Karth, dated June 1, 1964.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2456	NASA Release No. 63-196, NASA to Undertake Lunar Orbiter Photographic Missions. Lunar Orbiter will team with the Ranger hard lunar landing spacecraft. August 30, 1963.	Files
2457	Ranger Status Reports, Nos. 89-210, December 17, 1962 to April 19, 1965. (To Executive Council from H.M.Schurmeier)	Files
2458	Biography of Geoffrey Robillard, JPL, dated January 26, 1971.	Files
2459	Biography of Dr. V. W. Howard, Vice President, Engineering Department, Northrop; n.d.	Files
2460	Letter to R. Cargill Hall from George L. Salem, Northrop Corporation, confirming statement that Ranger Block V was Northrop's first large spacecraft system contract for NASA. April 15, 1974.	Files
2461	a: Transcript of tape recording. Interview of Dr. Homer Newell, (NASA) by Dr. Monte Wright, Director, NASA Historical Office, March 14, 1974.	Files
	b: Conditions of Access to or Use of Oral History Memoir.	Files
2462	1964 NASA Authorization, Tuesday, March 12, 1963, House of Representatives, Washington, D.C. "Further Statement of Dr. Homer E. Newell, Director, Office of Space Sciences, NASA, Accompanied by Edgar M. Cortright." pp. 1635-1649	Files
2463	NASA document, <u>Final Report of the Ranger Board of Inquiry</u> , November 30, 1962, including memorandum from Chairman, Ranger Board to Director, Office of Space Sciences, 5 December 1962.	Files
2464	NASA document, <u>Appendices to Final Report of the Ranger Board of Inquiry</u> , November 30, 1962, including memorandum from Chairman, Ranger Board of Inquiry, to Director, Office of Space Sciences, January 9, 1963.	Files
2465	Taped interview by R. Cargill Hall with Thomas Vrebalovich, formerly Ranger Block III Project Scientist, on June 11, 1974, subject: Ranger Block III Science.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2466	JPL Lab/Oratory, "Rechtin Gives Some Management Observations," p. 8. 1974/2 issue.	Files
2467	NASA Memorandum to Earl D. Hilburn from Dr. Robert C. Seamans, Jr., subject: Ranger VI Review Board, February 3, 1964.	Files
2468	NASA Memorandum from Dr. Robert C. Seamans to Earl D. Hilburn, subject: Clarification of Ranger VI Review Board Membership Established February 3, 1964, n.d.	Files
2469	Docs., Ranger VI Review Board (member list): n.d.	Files
2469a:1	Hilburn Board Recommendations and Resultant Actions: p. 1.	
2469a:3	Recommendations of the Board. p. 3.	
2469a:4	Recommendation that NASA should monitor Ranger test program as accomplished at JPL. p. 4.	
2469b	Letter from Homer Newell to Dr. William H. Pickering. "I was particularly impressed by the teamwork of our staffs...." Also summarization for future conduct of Ranger Program. July 28, 1964.	
2469c:1	JPL letter from W. H. Pickering to Dr. Homer E. Newell, May 22, 1964:	
2469c:1	This letter report is submitted in response to your request for a comprehensive reply to the "Final Report of the Ranger 6 Review Board." p. 1.	
2469c:3	....It would appear that the Board was all too eager to rationalize...p.3.	
2469d:1	Letter from James E. Webb to Hon. Joseph E. Karth, Acting Chairman, Subcommittee on NASA Oversight Committee, regarding report of the Ranger 6 Review Board, dated June 4, 1964.	
2469e	Memorandum from Homer E. Newell to Robert C. Seamans, Jr., regarding response to the "Final Report of Ranger 6 Review Board." May 28, 1964.	
2469f:1	Memo from Oran W. Nicks to Homer R. Newell, E. M. Cortright, re: Ranger 6 Review Board. April 9, 1964.	
2469f:2	p. 2 of item (1) above. Regarding attempting to restore some indication of faith in the line organization.	
2469g	Letter from Earl D. Hilburn to Dr. William H. Pickering, enclosing additional copies of Ranger 6 report. April 6, 1964.	
2469h	Memorandum from Walter Jakobowski to Ranger Files, subject: Summary of meeting held with JPL on March 4 to formulate Ranger recovery plan. March 18, 1964.	
	p. 3 of above memo (1): Listing discussions not completely resolved.	

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2469i:1	Memo from Newton W. Cunningham to Homer E. Newell and Edgar M. Cortright, subj: Ranger VI Failure Report Presentation of February 14, dated February 18, 1964.	Files
2469i:2	p.2 of above memo, regarding second comment by Hilburn, which alluded to possibility that his Board might be asked to look into other areas of spacecraft.	Files
2469j:1	Memo from Walter Jakobowski to Homer E. Newell and Edgar M. Cortright, subject: Comments on Ranger Failure Review Board Presentation on February 14. p.1.	Files
2469j:5	P.5 of above memo, regarding defective transistor lead.	Files
2469k:1	Memo from Earl D. Hilburn to Distribution, subject: Ranger VI Review Board, dated February 3, 1964.	Files
2469k:2	Present schedule for launch of Ranger VII--20th February.	Files
2470	Kelley Board Recommendations and Resultant Actions, <sup>1962</sup> 1964	Files
	a. Kelley Board Recommendations - Action.	Files
	b. Memorandum from Agena Program Manager to Ranger Program February 5, 1964. Completed Action.	Files
	c. Letter from Edgar M. Cortright to Hon. Joseph E. Karth, transmitting additional information on status of Ranger, December 28, 1962.	Files
	d. Letter from J. D. Burke to Commander Albert J. Kelley, subject: Ranger Improvement Measures, November 9, 1962.	Files
	e. Memorandum to Chairman of Ranger Board of Inquiry from Oran W. Nicks, subject: Review of Ranger Spacecraft, October 29, 1962.	Files
	f. Memorandum from Homer E. Newell to Dr. Albert J. Kelley, subject: Review of Ranger Spacecraft, October 29, 1962.	Files
2471	a. Memorandum from Homer E. Newell to Associate Administrator, Files subject: Actions Taken by OSSA in Response to the "Final Report of the Ranger VI Review Board." July 25, 1964.	Files
	a.b. Memorandum from Oran W. Nicks to Homer E. Newell, subject: Summary of Actions Taken in Response to the Detailed Recommendations of the Ranger VI Review Board, July 23, 1964.	Files
	b.c. Report of OSSA Buy-Off Committee on Ranger B Spacecraft Freshment Meeting of June 15-16, 1964. n.d.	Files
	d. Memorandum from Homer E. Newell to Associate Administrator, Files subject: Ranger B Status Review, July 10, 1964.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2471	JPL letter from H. M. Schurmeier to Radio Corporation of America, Attention: Barton Kreuzer, subject: Ranger TV System, Hilburn Report, May 12, 1964.	Files
2472	<u>Final Report of the Ranger 6 Review Board, March 17, 1964</u>	Files
2473	Letter from James E. Webb to Monte D. Wright, NASA Historian, regarding Gemini manuscript, and notes kept of the discussions with the President, dated May 24, 1974.	Files
2474	Memorandum from Earl D. Hilburn to Dr. Seamans, subject: Suggestions relative to the future handling of the Ranger/Surveyor/Mariner Projects, dated March 20, 1964.	Files
2475	Taped interview by R. Cargill Hall with General Alvin R. Luedecke, concerning JPL/Ranger History. September 11, 1974.	Files
2476	Letter from James E. Webb to Clinton P. Anderson, Chairman, Committee on Aeronautical and Space Sciences, Washington, D.C., concerning special board to review Ranger 6 spacecraft failure of television cameras, dated March 31, 1964.	Files
2477	Letter from Earl D. Hilburn, NASA, to Donald F. Hornig, Director, Office of Science and Technology, Washington, concerning distribution of the Ranger 6 Report.	Files
2478	Letter from Joseph E. Karth, Acting Chairman, Committee on Science and Astronautics, Washington, to James E. Webb, concerning scheduled hearings of the Subcommittee on NASA Oversight on the Ranger Project, April 20, 1964.	Files
2479	Letter from Hugh L. Dryden and James E. Webb to Joseph E. Karth, concerning release of recent internal investigative report on the Ranger 6 flight, April 23, 1964.	Files
2480	Letter from James E. Webb to Joseph E. Karth concerning Report of the Ranger 6 Review Board, dated June 4, 1964.	Files
2481	<u>Missiles and Rockets</u> , Editorial, "A \$150-Million Failure," concerning Rangers, by William J. Coughlin, February 10, 1964, p.50.	Files
2482	<u>Missiles and Rockets</u> , Editorial, "Praise for Caesar," concerning Investigation of Ranger program, by William J. Coughlin, May 11, 1964, p. 46.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2483	JPL Memo to Distribution from L.M.Bronstein/A.E. Dickinson, subject: RA-1 Spacecraft Failure Analysis, dated August 10, 1961.	Files
2484	Article, <u>Business Week</u> , Research, "How Should A Space Lab be Organized?" House subcommittee opens hearings into debate between NASA and JPL over how to insure success for Ranger moon shot. May 2, 1964.	Files
2485 a	Memo to JPL Senior Staff, Sec.Chiefs and Section Managers, from W. H. Pickering, subject: Organizational Realignment, November 11, 1963.	Files
b.	NASA Contract for JPL; proposed management fee for fiscal year 1963-64. Possible conflicts of interest. October 7, 1963.	
c.	Resolution for Authorized Signatures on Certain Documents, November 4, 1963.	
d.	NASA Contract for JPL, November 18, 1963.	
2486	<u>Public Papers of the Presidents</u> , item 81, "Remarks Following a Briefing at the National Aeronautics and Space Administration," February 25, 1965 - Lyndon B. Johnson, 1965, pp. 214-217 (in two books) Book 1 - January 1 to May 31, 1965.	Files
2487	Note A: Burke's position on science; comments on Ranger manuscript, p.13-8, n.d.	Files
2488	(From Pickering Files, roll 10-6) Letter from Dr. Pickering to Dr. Abe Silverstein, Director, SF Development, NASA, regarding a post-Vega program, and steps to be taken on schedules, as indicated. December 29, 1959.	Files
2489	(From Pickering Files, Roll 10-6) Letter from W. H. Pickering to Dr. Wernher von Braun, Army Ballistic Missile Agency, Redstone Arsenal, Alabama, regarding handling the bulk of the vehicle management through the existing EMD channel. December 21, 1959.	Files
2490	Morning News Conference, "Lunar Bridgehead," Homer Newell and W. H. Pickering, regarding historic occasion for <u>Ranger 7's</u> successful flight, November 25, 1964.	Files
2491	<u>Science</u> , "Ranger Moon Pictures: Implications:" T. Gold, Vol. 145, No. 3636, September 4, 1964, pp. 1046-1048.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2492	Letter from President Kennedy to Albert Thomas, House of Representatives, Washington, D.C., concerning relationship with current space effort and proposal at the U.N. for increased cooperation with the Russians in this field, cited in <u>Hearings Before The Subcommittee of the Committee on Appropriations, United States Senate, 88th Congress, first session, HR 8747, Appropriations, 1964.</u>	Files
2493	<del>"Military Policemen in Space,"</del> Louis C. Wyman, cited in <u>Independent Offices Appropriation Bill, 1964, October 7, 1963, House of Representatives Report No. 824.</u>	Files
2494	<u>Independent Offices Appropriations, 1964, General Provisions, stating "No part of any appropriation made available to NASA by this Act shall be used for expenses of participating in manned lunar landing carried out jointly by the U.S. and any other country without consent of Congress,"</u> cited in Report, Mr. Magnuson, from the Committee on Appropriations, HR.8747.	Files
2495	JPL/NASA booklet <u>68 Hours To The Moon, 1964.</u>	
2496	JPL document, <u>Ranger VIII and IX, Part II: Experimenters' Analyses and Interpretations, March 15, 1966.</u>	<i>file</i> Shelf
2497	JPL Technical Report 32-700, <u>Ranger VII, Part II: Experimenters' Analyses and Interpretations, February 10, 1965.</u>	Shelf
2498	JPL Log: <u>Agenda Interesting Points, from G. Kautz, dated February 4, 1960.</u>	Files
2499	<u>Ranger Spacecraft Chronology Log, from G. Kautz, 1959-1962.</u>	Files
2500	Ranger 3 Flight, <u>Final Statement, January 28, 1962.</u>	Files
2501	<u>Sky and Telescope, "Special Supplement, Lunar Results from Rangers 7 to 9," Gerard P. Kuiper, Lunar and Planetary Laboratory, University of Arizona, May, 1965.</u>	Files
2502	NASA News Release No. 65-212, <u>"NASA Selects Six Scientists-Astronauts for Apollo Program," June 28, 1965.</u>	Files
2503	NASA News Release No. 61-112, <u>"Statement by James E. Webb, Administrator," May 25, 1961.</u>	Files
2504	NASA News Release No. 63-141, <u>"Three New Appointments to Headquarters Staff," (Earl D. Hilburn, Robert F. Garbarini, and Robert W. Long), June 27, 1963.</u>	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
2505	Letter from Homer E. Newell to Cargill Hall, commenting on Ranger manuscript, dated July 28, 1975.	Files
2506	Letter from Eugene M. Shoemaker to R. Cargill Hall, with comments on the Ranger manuscript, dated July 22, 1975.	Files
2507	a Letter from Hugh Bradner, U. of California, S.D., concerning ocean-bottom use of the Ranger lunar seismometer, dated 17 September 1975, with attachments:	Files
	b. Letter from R.J. Swain, Vice President, and Manager, United GeoMeasurements Div., United ElectroDynamics, Inc. to Dr. Frank Press, regarding application of modified lunar seismometer, dated January 11, 1962.	"
	c. Summary: Oceanographic Seismic System, n.d.	"
	d. JPL Space Programs Summary No. 37-9. (diagrams)	"
	e. Figure 1, General Construction Diagram, seismometers.	"
2508	A set; collection of 8 documents on geophysical seismic measurements on the ocean bottom and on land.	Files
2509	NASA News Release (no number), "News Conferences on Ranger 6 Impact on Moon," February 2, 1964.	Files
2510	Science, "Dust on the Moon," Harold Urey, pp. 1419-1420, July-Sept. 1966.	Files
2511	Astronautics, The Ranger Program, Complete 12th IAF Congress Program, September 1961.	Files
2512	Agenda B Coordination Board, collection of documents, memos, meetings, 1960-1961.	Files

2513	2539	2584	
1	2540	2585	
2516	2541	2588	← dead nos.
2517	2551	2589	
2518	2552		
2519	2563		
2520	1		
2521	2556		
2522	1		
1	2558		
2527	2582		
2528	2583		
1	<del>2584</del>		
2530	<del>2589</del>		
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		FILES
2513	Organization Charts and Cost Estimates for Ranger, <sup>1963</sup> early 60's.	
2514.	Ranger in-flight failures, J. D. Burke, 20 October 1962.	"
2515.	Letter from Dr. Pickering to Homer Newell 29 October 1963; Ranger 6 diode contamination problem.	"
2516.	Ranger 6 Flight Summary prepared by Schurmeier for NASA <sup>6 Apr</sup> <del>4 June</del> 1964.	"
2517.	J. D. Burke Chrono 1963; letters, memos, etc. concerning Ranger Block V.	"
2518.	JPL IOM from J. D. Burke to Div Chiefs/Managers re Ranger follow-on mission plans, 16 August 1961.	"
2519.	JPL IOM from J. D. Burke to all concerned re RA-3 schedule, 21 November 1961.	"
2520.	Memo from J. D. Burke to Pickering re LMSD relations, 16 January 1961.	"
2521.	Letter from J. D. Burke to Hans Hucter, Director, Agena Vehicle Program, MSFC, re Ranger shroud and separation problem, 17 January 1961. (With enclosures pert. to this)	"
2522.	JPL IOM from J.D. Burke to all concerned re Ranger Test Philosophy, 13 June 1960: reliability to be obtained via design rather than testing.	"
2523.	JPL IOM from /C. I. Cummings to Senior Staff, Sec Chiefs/Managers, General Distribution List, re RA-1 and 2 Project Engineer, 7 June 1960.	"
2524.	JPL IOM from J. D. Burke to H. M. Schurmeier re Ranger Weight Control, 19 July 1960.	"
2525.	JPL IOM from J. D. Burke to H. M. Schurmeier re RA-3,4,5 Weight Control, 30 September 1960.	"
2526.	Memo from Air Force Ballistic Missile Division to MSFC and NASA re NASA Agena B Program, 10 November 1960.	"
2527.	Letter from Pickering to von Braun, 22 November 1960, re Agena.	"
2528.	JPL IOM from J. D. Burke to H. M. Schurmeier re RA-3 Weight situation, 16 February 1961.	"
2529.	Probability of Ranger mission success vs. spacecraft weight and weight reduction on Atlas Agena, 22 February 1961.	"
2530.	JPL IOM from S. Rubinstein to distribution re RA-3 spacecraft weight * reduction program, with table of weight reduction requirements attached, 1 August 1960.	"

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2531. JPL IOM from S. Rubinstein to J. D. Burke re RA-3 weight situation, 21 June 1960. FILE
2532. JPL IOM from J. D. Burke to H. M. Schurmeier re Ranger weight control, 19 July 1960. "
2533. TWX from LMSD to AFBMD, NASA, JPL re weight control, 22 February 1961. "
2534. JPL IOM from M. R. Mesnard to J. F. Koukol re removal of the 1/4 watt transmitter on RA-3,4,5, 23 February 1961. "
2535. JPL IOM from M. R. Mesnard to E. O. Linderman re removal of the instrumentation gyros and associated equipment on RA-3,4,5, 23 February 1961. "
2536. JPL IOM from H. M. Schurmeier to J. D. Burke re RA-3 weight reduction, 28 February 1961. "
2537. JPL IOM from L. M. Bronstein to J. D. Burke re weight reduction on Rangers 3, 4, 5 by elimination of unnecessary telemetering measurements, 14 April 1961. "
2538. LMSD weight status reports, 27 April 1961. "
2539. Memo from J. D. Burke to Pickering, Sparks, Cummings re JPL-NASA relations, 18 April 1962. "
2540. Memo from J. D. Burke to Brian Sparks re project management and JPL-NASA relations, 24 August 1962. "
2541. A Comparison of Lunar Photography from Space Probes and Ground-Based Observatories, T. W. Rackham, in Icarus, 1967, received 18 October 1966. "
2542. Letter from J. D. Burke to Oran Nicks re Ranger follow-on scientific experiments, 5 February 1962. "
2543. Letter from J. D. Burke to N. W. Cunningham re TV experimenters and auxiliary radiation experiments, 6 March 1962. "
2544. Letter from J. D. Burke to N.W. Cunningham re bus experiments for Rangers 6-9, with attached note to Pickering, Sparks, and Cummings, 13 April 1962. "
2545. Letter from J. D. Burke to N. W. Cunningham re Ranger 7-9 bus experiments, 10 August 1962, mentions possible deferment for some experiments. "
2546. Letter from J. D. Burke to A. J. Kelley re Ranger improvement measures and esp. selection of objectives, 9 November 1962. "

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2547. Memo from J. D. Burke to Pickering requesting reassignment on Ranger project under Parks, 6 December 1962.
2548. Memo from J. D. Burke to Pickering, Cummings, and /Sparks re mission priorities of RA-3, 15 January 1962.
2549. Memo from J. D. Burke to R. J. Parks re Div Chiefs views and recommendations ofn Ranger, 6 December 1962.
2550. Memo from J. D. Burke to Pickering, Sparks and Stewart re Future Projects Office, 27 December ;962.
2551. Letter from Oran Nicks to General A. Luedecke re Ranger hardware disposition, 8 December 1965.
2552. Memo from Cdr. W. Schubert to Dr. A. Silverstein re Agena Program Management, 15 January 1960.
- 2553 *Ranger Status Reports, #1-209, April 6, 1961 - April 21, 1965.*
- 2554 a. Letter from H. M. Schurmeier to N. W. Cunningham re Ranger design reviews, 21 February 1963.
- ~~2554~~ b. Recommendations of Kelley Board, draft 5, February 1964.
2555. JPL IOM from H. M. Schurmeier to P. Lesniak re disposal of Ranger residual inventory, 16 March 1966.
2556. Final /Report: Program of Principal Investigator, Gerard Kuiper and Ewen Whitaker, giving summary of activities and results, papers, etc., with letter of transmittal, 15 October 1966.
2557. JPL/MSFC MEMORANDUM OF AGREEMENT FOR INTERFACE DESIGN OF MARINER AND SURVEYOR PERFORMANCE, GUIDANCE AND TRAJECTORIES, 30 March 1961.
2558. Memo from H.M. Schurmeier to Brian Sparks re Juno II/Ranger conflict, 1 August 1960.
2559. Letter from Hans Hueter to C. I. Cummings transmitting letter of von Braun to General Ostrander re Agena, 22 January 1960.
- 2559 c  
2560 Management Plan for NASA Agena Project, 16 January 1960.
2560. JPL IOM from R. C. Hastrup to distribution re Ranger Sterilization Program, 24 May 1961.
2561. Memo from R. L. Heacock to C. I. Cummings re Ranger follow-on TV system, 28 June 1961.
2562. JPL IOM from R. C. Hastrup to distribution re procedures for sterile assembly of RA3 in SAF, 10 July 1961.
2563. JPL IOM from C. A. Hemler to file 2647 re high resolution TV camera mission, contractor selection, 14 July 1961.
2564. JPL IOM from E. P. Framan to distribution re spacecraft assembly prior to thermal sterilization, 20 July 1961.

SOURCE LIST 2  
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2565. JPL IOM from M. Eimer to C. I. Cummings re Division of the Space Sciences support to the Ranger 6, 7, 8, and 9 Project, 2 January 1962. FILE
2566. <sup>a, b, c</sup> Minutes of first and second Ranger 6-9 Design Review Meetings, 22 November 1961 and ~~20~~ February 1962, in JPL IOMs from M. R. Mesnard to distribution.
2567. Ranger Quarterly Review with NASA HQ, JPL, 25 July 1962, 2nd review.
2568. Third Ranger Quarterly Review with NASA HQ, JPL, 1 November 1962, including a summary of the Ranger 5 mission.
2569. JPL IOM from M. R. Mesnard to distribution re Ranger spacecraft biological sterilization program, 9 August 1962.
2570. JPL IOM from J. D. Burke to all concerned re NASA permission to stop heat sterilization of flight hardware, 6 November 1962.
2571. Ranger Quarterly Review Minutes, JPL, 19 February 1963.
2572. JPL IOM from H. M. Schurmeier to Frank E. Goddard rendering Summary of Ranger Sterilization Experience, 5 April 1963.
2573. Ranger Quarterly Review Minutes, JPL, 21 May 1963.
2574. Graph of RCA TV Contract (950137) Funding Status, 8 August 1963.
2575. JPL IOM from H. M. Schurmeier to Ranger Block III Project Distribution List re Revised Ranger Block III Project Guidelines, 12 March 1964.
2576. Definitions of functions of various panels in Lunar and Interplanetary Missions, 1964, JPL document.
2577. Series of documents dealing with Ranger TV subsystem from 1963-64.
2578. Ranger History Material Furnished for OSS/Karth Committee Investigation, April 1964.
2579. JPL IOM from R. D. Williams to H. M. Schurmeier and D. H. Kindt re Change in Parts Count From RA-6 to RA-7, 21 May 1964.
2580. JPL IOM from H. M. Schurmeier to distribution re Minutes of the Ranger Quarterly Review held 23 June 1964, dated 8 July 1964.
2581. Ranger RCA Costs, 26 January 1965.
2582. <sup>a+b</sup> Two JPL IOMs listing items developed on Ranger and used on other programs, 1 March 1965 and 1 March 1965.
2583. JPL IOM from C. I. Cummings to W. H. Pickering re Recommendations regarding Agena-B lunar program, 19 April 1960.



SOURCE LIST 2  
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2584. Letter from Abe Silverstein to W. Pickering relating SSSC approval of Pickering's experiment proposals for Agenas 3, 4, 5, 23 May 1960. FILE
2585. JPL IOM from Cummings and Burke to Pickering re Notes for October 11 Meeting of Pickering, Newell, Holmes and Seamans, 9 October 1962. "
2586. Letter from Eugene Shoemaker to W. H. Pickering describing new Joint Office of Space Sciences, with enclosed NASA announcements, 28 November 1962. "
2587. Letter from Newell and Holmes to Pickering notifying him of the establishment of a Manned Space Science Planning Group, with enclosed memo describing it, 20 November 1962. "
2588. JPL IOM from C. I. Cummings to W. Pickering and B. Sparks re JPL NASA cooperation on Lunar Program, 28 October 1960.
2589. JPL IOM from C. I. Cummings to Senior Staff and Sec Chiefs re Lunar Program staff, with attached statements on roles of the Lunar Program staff, 24 October 1960.
2590. JPL IOM from W. J. Downhower to C.I. Cummings re S-3 Lunar Capsule Study Proposals, 26 February 1960.
2591. Matrix of Responsibilities: Lunar Missions, listing primary and secondary responsibilities, February 1960.
2592. Ranger VIII Post-Impact Press Conference, JPL Auditorium, 20 February 1965.
2593. Letter from D. L. Forsythe to Colonel Eichel transmitting a copy of the Summary of Results of MSFC Center Study On Agena Program Management, 30 October 1962.
2594. Letter from W. H. Pickering to R. C. Seamans re AMR scheduling policy and NASA-DOD misunderstandings, 9 June 1961.
2595. NASA/AFBMD MANAGEMENT AGREEMENT, signed by Abe Silverstein and O. J. Ritland, received JPL 13 January 1960.
2596. Two JPL IOMs to J. D. Burke re JPL Spacecraft Scientific Experiments, 13 January 1960.
2597. JPL IOM from HEACOCK, SLOAN, NEUGEBAUER to M. Eimer re Scientific Experiments for the Lunar Impact Bus, 13 January 1960.
2598. Flight Analysis Report, RA-9, 21 March 1965.
2599. Ranger Application to Mars Exploration, 1965.
2600. TV Capsule Subsystem: Excerpt from Lunar System Studies, TR 21, by RCA, 31 January 1963.
2601. Technical Report No. 32-141: The Ranger Program, September 1961.

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*or Aug. 5th.  
See p. 1*

2602. RANGER VII: Special Report to Congress, 4 August 1964, prepared by NASA.

2603. PROJECT RANGER: Report of the Subcommittee on NASA Oversight of the CSA, US House of Representatives, 88th Congress, 16 June 1964.

2604. *a, b, c* Fifteen photographs from Ranger IX, March 1965, released by the Office of Public Education and Information of CPT. JPL  
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2605. A REVIEW OF SPACE RESEARCH, The Report of the Summer Study under the SSB 17 June-10 August 1962, Publication 1079, 1962.

2606. *TWX from JPL to NASA re incident at RCA involving bag of hardware, 12 June 1964.*

2607. NASA letter from Donald H. Menzel, Wilmot N. Hess, to Dr. Homer Newell, regarding invitation of conference on Nature of the Surface of Moon, to be held at Goddard SFC. Invitation from Commission 17 (The Moon) of the International Astronomical Union, etc. dated March 12, 1965.

2608. NASA letter from Keith Glerman to File, concerning meeting to concentrate efforts on lunar activities, with lesser attention towards Venus shots, July 24, 1959.





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## JPL HISTORY

BOOK NO.	TITLE	LOCATION
* 1.	July 19, 1957, Letter from Eberhardt Rechtin, JPL, to Dr. John O'Keefe, Army Map Service and including Microlock <del>and</del> data	FILES
* 2.	Sept. 25, 1957, Interoffice memo from H. L. Richter to W. H. Pickering enclosing copy of Microlock Article for IGY Rocket and Satellite Manual. "The Microlock Radio Tracking System" by Henry L. Richter, Jr.	FILES
* 3.	1964 <del>Mariner Mars JPL Bulletin</del> <i>trans to #6</i> #6	FILES
* 4.	Oct. 29, 1964, JPL Mariner Mars 1964 Press Kit	FILES
* 5.	<del>(No date)</del> Mariner IV Experiments, Feb., 1964	FILES
* 6.	<u>Surveyor Lander Mission and Capabilities</u> , Milton Beilock (This paper presents the results of one phase of research carried out at JPL under Contract No. NAS 7-100, sponsored by NASA) (No date)	FILES
* 7.	Letter from Dr. Emme, NASA Historian to Frank Malina, France, and including copy of document, <u>History of JPL, ROCKET RESEARCH AND DEVELOPMENT</u> Excerpts from letters written home by F. J. Malina between 1936 and 1946. <i>(a) Chronology from F. J. Malina to Eugene M. Emme</i>	FILES
* 8.	IGY-JPL Correspondence, 1956-1958. Tracking and Experiments	FILES
* 9.	JPL-GALCIT Directories, 1945-1946, JPL Organization & Personnel	FILES
* 10.	Negative: Schematic Diagram of Proposed Test Setup for Rocket Propulsive Units Research, August, 1936	FILES
* 11.	<sup>2</sup> Negative: Jet Propulsion Laboratory, Calcit, (Map of Facility) June 1945	FILES
* 12.	<sup>2</sup> Negative: Diagram of Ercoupe Jet Unit, Nacelle Installation, August 1941, May 1942	FILES
* 13.	4 Negatives: Field Notes on Wac-B Firings, White Sands Proving Grounds, Dec. 3, 1946	FILES
* 14.	<del>JPL Historical Photos, 1936-1963</del> <i>all 3-34</i>	FILES
* 15.	Documents re Radar Contact with Planets, 1963 TR No. 32-477, Relationship Between the System of Astronomical Constants and the Radar Determinations of the Astronomical Unit, Jan. 1964 On the presence of Oxygen in the Atmosphere of Venus, Jan. 1964 TR No. 32-280, Radar Exploration of Venus, May 1962 TR No. 32-221, The Astronomical Unit Determined by Radar Reflections from Venus, April, 1962 TR No. 32-132 Radar Exploration of Venus: Goldstone Observatory Report for March-May 1961	FILES

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* 16.	News accounts of JPL Transfer to NASA, October 1958	FILES
* 17.	JPL Status, 1956-57	FILES
* 18.	Clippings and data on CORPORAL	FILES
* 19.	Clippings and data on SERGEANT	FILES
* 20.	Clippings and data on DR. THEODORE VON KARMAN <i>note: (a) abstracted</i>	FILES
* 21.	Clippings and data on DR. W. H. PICKERING	FILES
* 22.	Clippings and data on DR. TSIEN HSUESHEN	FILES
* 23.	"Developing Electric-Propulsion Powerplants", David G. Elliott, JPL, Reprint from <u>Astronautics and Aerospace Engineering</u> , June 1963	FILES
* 24.	Clippings and data on MARINER II	FILES
* 25.	Clippings and data on DEVELOPMENTS IN SOLID PROPELLANTS	FILES
26.	<u>Astronautics</u> , Journal of the American Rocket Society, No. 41, July, 1938	FILES
(a)	"Rocketry in California: Plans and Progress of the GALCIT Rocket Research Group" by Frank J. Malina	
(b)	"Dry Fuel Experiences" by Peter van Dresen	
(c)	Letters to the Editor	
27.	(a) History of the Lab (JPL) contained in Open House Program, Nov., 1949 and (b) article "The Jet Propulsion Laboratory", <u>Engineering and Science</u> , Vol. XVI, Oct. 1952	FILES
28.	(a) <u>Galcit</u> , Vol. 49, No. 2, May, 1940 <sup>GALCIT-History of 1st Ten Years</sup> and (b) <u>Journal of the British Interplanetary Society</u> , Vol. 6, No. 2, Sept. 1946 (a history of JPL to 1946, all major projects) (also history memo)	FILES
* 29.	JPL Facilities, June 1944	FILES
30.	Reprint from <u>Jet Propulsion</u> , Nov. 1955, "Twenty-Five Years of Rocket Development" by Howard S. Seifert of Ramo-Wooldridge Corporation, Los Angeles, Calif. (includes JPL History)	FILES
* 31.	"The Jet Propulsion Laboratory", by Dr. William H. Pickering, Director <u>Bulletin of the California Institute of Technology</u> , Vol. 73, No. 4, Nov., 1964	FILES
* 32.	Schematic of Wac Corporal	FILES

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BOOK NO.	TITLE	LOCATION
* 33.	Schematic - Malina 1st Rocket Test Stand Facility Drawings, circa 1936	FILES
* 34.	Historical Photos	FILES
* 35.	<del>Mariner IV Interplanetary Science Findings (NASA NEWS)</del> <i>IM Transferred to #8-15</i>	FILES
* 36.	Explorer I Photos	FILES
* 37.	Pioneer III News Release of Scientific Findings, Dec. 1958	FILES
* 38.	JPL paper, "An Eighteen-Band Research and Development Type of Telemetering System For Guided-Missile Use," J.F.Koukol, February 18, 1954.	FILES
* 39.	JPL Press Conference, Oct., 1957,	FILES
* 40.	<del>Caltech/JPL Memo Vole 4-190 The JPL Telemetering System Ground Equipment, Frederick H. Davis, JPL Publication No. 38, July 14, 1955.</del>	FILES
41.	<u>Rocket-Sonde</u> , by Homer E. Newell, Associate Administrator for Space Science and Applications, NASA, Washington, D.C., Feb. 28, 1967	FILES
42.	JPL Document, Report No. 20-63, <u>Air-Borne Telemetering Equipment for The Corporal</u> , Alvin W. Newberry, January 28, 1952.	FILES
43.	Program for Jet Propulsion Research at the California Institute of Technology 1940-1941 (Revised June 1, 1940) [Includes diagram of facilities]	FILES
44.	"The Age of Space.....In the Beginning" JPL 510, [Script for Movie ] by Robert Johnson, Dec. 17, 1964	FILES
45.	(a) "The History of JPL" (b) Chronology to Sept. 22, 1966. Compiled by p/ P.I.O./JPL	FILES
46.	<u>Rough Draft of Program for Jet Propulsion Research at the California Institute of Technology 1941-1942.</u> (Draft dated May 23, 1941)	FILES
47.	Excerpts from JPL-4 Bi-monthly Conference Reports Pertaining to <u>RAFT</u> , November 28, 1944 thru January 1947.	FILES
48.	News release (early December 1958) announcing the flight of Pioneer III launched Dec. 6, 1958.	FILES
49.	News release no subject or date (1960?)	FILES
50.	Interoffice memo to B. Huber from R. Wilford <del>including</del> dated Feb. 22, 1965 SUBJECT: GUGGENHEIM FOUNDATION, Early Days in JPL, and Previous Period	FILES
51.	News Release dated 15 Nov., 1957 containing background material on JPL	FILES
52.	Aerojet Corp. Report No. TDR-12, Revision A [April, 1961], concerning October 1961 meeting of A.R.S.	FILES

\* NOT ABSTRACTED OR NOTED ON CARDS

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53.	<u>This High Man: The Life of Robert H. Goddard</u> by Milton Lehman, Farrar, Strauss and Company, New York, 1963	JPL LIBRARY 926.29 L
54.	Clippings & data on Frank J. Malina (Biography, list of publications, list of art shows)	FILES
55.	JPL-GALCIT RECOMMENDED INCREASES IN SALARIES AND WAGES, March, 1946 includes all employees at JPL as of March, 1946.	FILES
56.	<u>Ordnance Research Bulletin</u> , August 1954, ORB-54-8, Durham, North Carolina	FILES
57.	JPL, GALCIT, CALTECH, Interoffice Memo from F. J. Malina (for Dr. Th. von Karman, Director, GALCIT) to Section Chiefs, JPL Subject: <u>Preliminary Organization of Jet Propulsion Laboratory, GALCIT</u> , dated August 18, 1944	FILES
*58.	William Bollay, "Performance of the Rocket Plane," <del>CIT</del> Report No. R-5, [no date; 1939?]	LIBRARY
* 59.	Jack Parsons, Halifax Explosives Co., June 10, 1937, "A Consideration of the Practicality of <del>Various</del> Various Substances as Fuels for Jet Propulsion" JPL R-7	LIBRARY
60.	F. J. Malina, "The Jet Propulsion Laboratory, Galcit" Memo No. JPL-3, June 25, 1945 (a) <i>Indices of Reports prepared by Jpl, Galcit - thru June 1945</i> (a) <del>FILE</del>	LIBRARY
61.	"Memorandum on the Possibilities of Long-Range Rocket Projectiles" by Th. von Karman AND "A Review and Preliminary Analysis of Long-Range Rocket Projectiles" by H. S. Tsien and F. J. Malina, Memo JPL-1, copy 12, dated Nov. 20, 1943	LIBRARY
62.	"Air Corps Jet Propulsion Research, Final Report for 1939-40", GALCIT Project No. 1, Report No. 3, by F. J. Malina, J. W. Parsons, and E. S. Forman dated June 15, 1940	LIBRARY
* 63.	<i>Same as 100</i> "The Applicability of Solid Propellants to High-Performance Rocket Vehicles" ORDCIT Project, Contract No. W-04-200-ORD-455, Memo No. 4-17, by M. Summerfield J. I. Shafer, H. L. Thackwell, Jr., C. E. Bartley, October 1, 1947.	LIBRARY
64.	"Results of Flight Tests of the Ercoupe Airplane with Auxiliary Jet Propulsion Supplied by Solid Propellant Jet Units", GALCIT Project No. 1, Report No. 9, by F. J. Malina and J. W. Parsons, September 2, 1941	LIBRARY
* 65.	"Comparative Study of Jet Propulsion Systems as applied to Missiles and Transonic Aircraft", Memo JPL-2, by Th. von Karman, with contributions from F. J. Malina, M. Summerfield, and H. S. Tsien, March 28, 1944.	LIBRARY
66.	"Development and Flight Performance of a High Altitude Sounding Rocket, the WAC Corporal", Report 4-18, by F. J. Malina, Contract No. W-04-200-ORD-455, ASF ORdnance Dept., January 24, 1946.	LIBRARY
* 67.	"Characteristics of the Rocket Motor Unit Based on the Theory of Perfect Gases" (Published in Journal of the Franklin Institute, Vol. 230, No. 4, pp. 433 to 454, October, 1940, by F. J. Malina	LIBRARY



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* 68.	Notes on first rocket tests, October and November, 1936, by Malina & Parsons	FILES
* 69.	Article from p. 7, <u>Engineering and Science</u> , Vol. XIV, January., 1951	FILES
* 70.	"The Earth Satellite Program", by W. H. Pickering, <u>Engineering and Science</u> , Vol. XIX, May, 1956, pp. 13-18.	FILES
* 71.	"Project Vanguard--The Earth Satellite Program", by W. H. Pickering, <u>Engineering and Science</u> , Vol. 20, June 1957, pp. 12,13	FILES
72.	<u>Jet Propulsion Engines</u> , O. E. Lancaster, ed., Volume XII High Speed Aerodynamics and Jet Propulsion, Princeton, J. J., Princeton University Press, 1959. a. Chapter 1. "A Short History of Rocket Propulsion up to 1945" <del>W. H. Malina</del> by Frank J. Malina b. Chapter 2. "Rocket Development since 1945" by R .C. Truax	LIBRARY 629.1435 L-1
* 73.	Maps of JPL site and facilities, 1940, 1944, 1945.	FILES
74.	Welcome brochure to Alumni Seminar Tours of JPL; outlining JPL facilities and structure, 1959.	FILES
* 75.	F. J. Malina, <u>Report on the Rocket Motor and its Applications as an Auxiliary to the Power Plants of Conventional Aircraft</u> , RRP-GALCIT Report No. 2, August 24, 1938	LIBRARY RRP-GAL Report #
* 76.	F. J. Malina, <u>Report on Application of Rocket Propulsion to a Radio Controlled Flying Torpedo</u> , RRP-GALCIT Report No. 3, Oct. 5, 1939	LIBRARY
* 77.	F.J. Malina, H. S. Tsien, J. Parsons, A. Smith, and W. Bollay, <u>Report of the GALCIT Rocket Research Project</u> , GALCIT Report No. RRP-1, April 10, 1937	LIBRARY
78.	<u>JPL Industry Conference Proceedings</u> , Conducted by Jet Propulsion Laboratory October 26, 1960. (pub. by JPL Nov. 18, 1960)	FILES LIBRARY
79.	<u>Historical Origins: George C. Marshall Space Flight Center</u> , Huntsville, Ala., MSFC Historical Monograph No. 1, by David S. Akens, MSFC Historian, Dec. 1960	BOOKSHE
80.	JPL Document, <u>Telemetering Results from RAFT Rounds Fired September 4 &amp; 5, 1947</u> , ORDCIT Project, Contract No. W-04-200-ORD-455, Ordnance Department, Project Note No. 4-33, J. R. David, Copy No. 3, June 11, 1948.	Files
81.	<del>Nasa Historical Report</del> , <u>First Five Years of Nasa, A Concise Chronology</u> , by Molly Holme , NASA Historical Staff, Washington 25, D. C., Sept. 17, 1963	FILES
82.	<u>Aeronautical and Astronautical Events of 1961; Report of the National Aeronautics and Space Administration to the Committee on Science and Astronautics, U. S. House of Representatives, 87th Congress, U. S. Govt. Printing Office, Washington, 1962</u>	FILES
83.	<u>Astronautical and Aeronautica,1 Events of 1962, Report of the National Aeronautics and Space Administration to the Committee on Science and Astronautics, U. S. House of Representatives, 88th Congress, First Session, U. S. Govt. Printing Office, Washington, June, 1963.</u>	BOOKSHI

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84.	<u>Astronautics and Aeronautics, 1963: Chronology on Science, Technology, and Policy</u> , Prepared by the NASA Historical Staff, Office of Policy Planning, Scientific and Technical Information Division, NASA, Washington, D. C. 1964 NASA SP-4004	BOOKSHELF
85.	<u>Astronautics and Aeronautics, 1964: Chronology on Science, Technology, and Policy</u> , Prepared by the NASA Historical Staff, Office of Policy Planning, Scientific and Technical Information Division, NASA, Washington, D. C. 1965 NASA SP-4005	BOOKSHELF
* 86.	F. J. Malina, "Report on Jet Propulsion for the National Academy of Science Committee on Air Corps Research", Dec. 21, 1938	LIBRARY JPL-MISC-4 FILES
* 87.	John W. Parsons and Edward S. Forman, "Experiments with Powder Motors for Rocket Propulsion by Successive Impulses." <u>Astronautics</u> , No. 43, Aug. 1939	FILES
88.	Book review by Th. von Karman of new work on JATO by Admiral Bolster, <u>ARS Journal</u> , No. 85, June, 1951	FILES
* 89.	F. J. Malina, "Is the Sky the Limit? Ordnance Rockets Demolish the Barriers of Space", <u>Army Ordnance</u> , No. 31, July-Aug, 1946. (Also publication papers and photo of Wac Corporal	FILES
* 90.	F. J. Malina and Martin Summerfield, "The Problem of Escape from the Earth by Rocket", <u>Journal of Aer. Science</u> , No. 14, 1947	FILES
* 91.	F. J. Malina and A. M. O. Smith, "Flight Analysis of the Sounding Rocket", <u>Journal of Aer. Science</u> , No. 5, 1938	FILES
* 92.	Tsien and Malina, "Flight Performance of a Sounding Rocket with Special Reference to Propulsion by Successive Impulses", <u>Journal of Aer. Science</u> , No. 6, Dec., 1938	FILES
93.	Frank J. Malina, <u>Memoir on the Galcit Rocket Research Project, 1936-38</u> June 6, 1967. Prepared for the First International Symposium on the History of Astronautics, "PRE-1939 MEMOIRS OF ASTRONAUTICS", organized by the International Academy of Astronautics with the cooperation of the International Union of the History and Philosophy of Science at Belgrade on 25-26 Sept, 1967.	FILES
94.	Newspaper clippings, 1937 thru 1939.	BOOKSHELF
	a. Associated Press, dated Pasadena, Calif., April 1937/1938	
	b. "Pasadena Men Aim At Rocket Altitude Mark", Pasadena, Calif. July 15, 1938	
	c. "Rocket Altitude Record Sought", Los Angeles Examiner, July 15, 1938	
	d. "Plan to Plumb Space With Rocket Told", Times (no city) datelined New York, Jan. 26 (AP)	
	e. "Scientists Plan to Shoot Rocket 967 Miles in Air", Houston Chronicle, January 26, 1938	
	f. "Test Motors to Send Rockets 100 Miles Up", Evening Herald and Express (Los Angeles), April 6, 1938	
	g. "Our Expanding Universe: Progress in the World of Science" Los Angeles Times, Sunday Magazine p. 24, Nov. 26, 1939	

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95	<u>GALCIT: The First Twenty-Five Years</u> , published by The California Institute of Technology, Pasadena, Calif., June, 1954, Printed by Anderson, Ritchie & Simon: Los Angeles	LIBRARY 629. 13072 CA 1928/29 1954/54
96	<u>JPL Research and Development Activities</u> , (ORDCIT Project), Pub. <del>W</del> No. 114	SECRET LIBRARY
97	Howard S. Seifert, <u>History of Ordnance Research at The Jet Propulsion Laboratory, 1945-1953</u>	CONFI LIBRARY
98	JPL Progress Report No. 4-60: <u>Recent Modifications of Corporal E Telemetering System</u> , F. W. Lehan, Copy C-26, April 13, 1948.	FILES
99	Paper, <u>Why Telemetering?</u> (Telemetering Conference, Inyokern, 6/12/52) by Dr. W. H. Pickering.	Files
100	Paper; Excerpts from document pertaining to JPL-ABMA; Addendum #1; Minimum Plan; Answers to Dr. Glennan's Questions, August 23, 1959.	Files
101	Wheeler, W. H., Whittaker, H., and Pike, H. H. M., "Solid and Liquid Propellants," <u>Journal of the Institute of Fuel</u> , Vol. XX, No. 114, June, 1947, pp. 137-153. A paper presented to The Institute of Fuel, at The Institution of Mechanical Engineers, S. W. I., on Feb. 5, 1947. The chair was taken by Prof. D. T. A. <del>AT</del> Townend.	FILES
102	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 16, December 20, 1949 to February 20, 1950 (CONFI), March 15, 1950	CDC
103	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 17, February 20, 1950 to April 20, 1950 (CON FI), May 15, 1950	CDC
104	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 20, August 20, 1950 to October 20, 1950 (CONFI), November 15, 1950	CDC
105	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 3, Oct. 20, 1947 to Dec. 20, 1947, (UNC) Jan. 15, 1948	<del>FILES</del> SHELF
106	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 4, Dec. .20, 1947 to Feb. 120, 1948, (UNC), March 15, 1948	<del>FILES</del> SHELF
1	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 5, Feb. 20, 1948 to April 20, 1948 (UNC), May 15, 1948	<del>FILES</del> SHELF

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108	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 6, April 20, 1948 to June 20, 1948 (UNC), July 15, 1948	<del>FILES</del> SHELF
109	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 7, June 20, 1948 to August 20, 1948 (UNC), Sept. 15, 1948	<del>FILES</del> SHELF
110	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 8, August 20, 1948 to October 20, 1948 (UNC), Nov. 15, 1948	<del>FILES</del> SHELF
111	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 9, Oct. 20, 1948 to Dec. 20, 1948 (UNC), Jan. 15, 1949	<del>FILES</del> SHELF
112	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 13, June 20, 1949 to Aug. 20, 1949 (UNC) Sept. 15, 1949	<del>FILES</del> SHELF
113	Jet Propulsion Laboratory, Combined Bimonthly Summary No. 14, Aug. 20, 1949 to Oct. 20, 1949 (UNC), Nov. 15, 1949	<del>FILES</del> SHELF
14 114	Bartley, C. E., <u>A Preliminary Investigation of the Rubber-Base Solid Propellant ORDCIT 21,</u> Progress Report No. 4-18, Jet Propulsion Laboratory, August 26, 1945	JPL LIBRARY
11	Meeks, P. J. <u>Design of 1500 Pound Rocket Motor and Selection of Control Valves for the WAC Corporal,</u> Progress Report No. 4-12, Jet Propulsion Laboratory, May 8, 1945	JPL LIBRARY
116	Pickering, W. H. <u>Control and Telemetering for Corporal E,</u> Progress Report No. 4-15, Jet Propulsion Laboratory, May 15, 1945	JPL LIBRARY
117	Boden, Robert H. <u>Film Cooling</u> , Progress Report No. 4-19, Jet Propulsion Laboratory, Jan. 9, 1946	JPL LIBRARY
118	Jet Propulsion Laboratory, Interoffice Memo from W. H. Pickering to Senior Staff, Section Managers, and Group Supervisors, August 23, 1967. Subject: "Review of Aims and b Objectives"	FILES
119	119a: <u>Research Program for the First Type of Long-Range Jet Propelled Missile (XF10S1000-A and XF10S1000-B)</u> JPL Memo No. 4-1, August 2, 1944, # 119b: Letter from F. J. Malina for Th. von Karman to ORDCIT accompanying above JPL Memo No. 4-1,	JPL LIBRARY
120	Memorandum for Administrator from Walter T. Bonney, Acting PIO., Washington, D.C., subject: "Arsenal Concept," September 30, 1958.	Files
1	<u>Considerations of the Feasibility of Developing a 100,000 Ft. Altitude Rocket (THE The "Wac Corporal"),</u> F. J. Malina and H. J. Stewart, JPL Memo No. 4-4, ORDCIT Project, Letter Order Contract No. W-04-200-ORD-455, ASF Ordnance Dept., Memorandum No. 4-4, January 16, 1945	JPL LIBRARY
122	G. B. Millikan, <u>Scale-Model Flight Tests of Ordcit-Winged Missiles</u>	

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122		C. B. Millikan, <u>Scale Model Flight Tests of Ordcit Winged Missiles</u> , ORDCIT Project, Contract No. W-04-200-ORD-455, ASF Ordnance Dept., April 8, 1945, JPL Memorandum No. 4-6	JPL LIBRARY
123		Memorandum for Administrator from Richard Rhode and Newell Sanders, Subject: Summary of Observations Made During Visit to Army Ballistic Missile Agency, August 26 and 27, 1958.	Files
124		Silk, N. R., <u>Telemetering Ground Equipment for the Corporal E</u> , ORDCIT Project Contract No. W-04-200-ORD-455, JPL Progress Report No. 4-32, July 17, 1947	JPL LIBRARY
125		H. J. Stewart, <u>Preliminary Considerations Regarding the Proposed V-2 Wac Missile</u> , ORDCIT Project, Contract No. W-04-200-ORD-455, ASF Ordnance Dept., August 16, 1946, JPL Memo No. 4-16	JPL LIBRARY
126		H. J. Stewart and W. Z. Chien, <u>The Estimated Performance of the ORDCIT Corporal Series of Guided Missiles</u> , JPL Memorandum No. 4-12, ORDCIT Project, Nov. 30, 1945 (CONFI)	JPL LIBRARY
127		<u>Satellite and Space Program Progress Report For NASA for January 1959</u> , U. S. Army Ordnance Missile Command, February 15, 1959, 60278 (CONFI)	JPL LIBRARY
1		Jet Propulsion Laboratory, <u>Combined Bimonthly Summary No. 1, June 20, 1947 to August 20, 1947</u> . Pasadena: Jet Propulsion Laboratory, Sept. 15, 1947	SHELL JPL LIB
129		Jet Propulsion Laboratory, <u>Combined Bimonthly Summary No. 2, August 20, 1947 to October 20, 1947</u> . Pasadena: Jet Propulsion Laboratory, Nov. 15, 1947.	SHELL JPL LIB
130		Jet Propulsion Laboratory, <u>Combined Bimonthly Summary No. 10, December 20, 1948 to February 20, 1949</u> . Pasadena: Jet Propulsion Laboratory, March 15, 1949	SHELL LIBR
131		Jet Propulsion Laboratory, <u>Combined Bimonthly Summary No. 11, February 20, 1949 to April 20, 1949</u> . Pasadena: Jet Propulsion Laboratory, May 15, 1949.	SHELL LIBR
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137	"Research and Development at the Jet Propulsion Laboratory, GALCIT," <u>Engineering and Science</u> , Vol. IX, No. 7, July, 1946. pp. 5-14	FILES
138	<u>Memorandum on Fred Project</u> , H. S. Seifert, R. B. Canright. JPL Memo No. 1-3, March 19, 1945 (Contract No. W-535-ac-20260)	JPL LIBR <i>File</i>
139	<u>Considerations of the Feasibility of Developing a 100,000 Ft. Altitude Rocket (The "Wac Corporal")</u> , F. J. Malina and H. J. Stewart, JPL Memo No. 4-4, January 16, 1945. (Letter Order Contract No. W-04-200-ORD_455)	JPL LIBR
140	<u>The Status and a Future Program for Research and Development of Solid Propellants</u> , L. G. Dunn and M. M. Mills, JPL Memo No. 4-5, March 19, 1945 (Letter Order Contract No. W-04-200-ORD-455)	JPL LIBR LIBR
141	Memorandum for Director, NACA, from Donald R. Mulholland, Associate Western Coordinator, Subj: Visit to Caltech/JPL on Sept. 4, 1958.	Files
142	<u>Research Program for the Second Type of Long-Range Jet Propelled Missile (XF30L 20,000)</u> , ORDCIT Memorandum No. 2 A (ORDCIT Project, Contract No. 04-200-ORD-455-RAD, 2865-1, ASF ORDNANCE DEPARTMENT) Jet PROPULSION Laboratory August 20, 1944 (Contract No. 04-200-ORD-455-RAD, 2865-1) JPL Memo 4-2	LIBR LIBR
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144	<u>Preliminary Discussion of an Acid-Aniline Propellant Booster Rocket of 100,000 Lb-Sec Impulse (The "Short Snorter")</u> , H. S. Seifert, Memorandum No. 4-8, May 3, 1945 (Contract No. W-04-200-ORD-455)	LIBR
145	<u>Preliminary Design of a Shore-to-Ship Guided Missile</u> , J. B. Kendrick Memorandum No. 4-11, November 1, 1945, (Contract No. W-04-200-ORD-455)	LIBR
146	<u>The Liquid Propellant Rocket Motor - Present Status and Direction of Development</u> , F. J. Malina, H. S. Seifert, Memorandum No. 4-7, August 28, 1945 (Contract No. W-535-ac-20260)	LIBR
147	<u>Analysis of Supersonic Wind Tunnel Tests on a 1/16-Scale Model of the Shore- to-Ship Guided Missile</u> , J. B. Kendrick, Memorandum No. 4-15, August 16, 1947 (Contract No. W-04-200-ORD-455)	LIBR
148a	<u>Explorer I</u> , (4-page descriptive brochure, includes photos of principals and diagram of Explorer I)	FILES
148b	<u>Space Explorers.</u> , Jet Propulsion Laboratory, California Institute of Technology, Pasadena: July, 1958	FILES
149	"NASA Plans 4% Reduction in Personnel", <u>Los Angeles Times</u> , Oct. 25, 1967 (1968 fiscal NASA authorization)	FILES
150a.	Interview with Dr. Eberhardt Rechtin, JPL, November 2, 1967, concerning the Deep Space Network.	FILES
150b.	Interoffice Memo No. 218, dated Dec. 24, 1963 from William H. Pickering to Senior Staff, Section Chiefs, and Section Managers. Subject: Establish- ment of the Deep Space Network.	FILES

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151	<p>Report of the Stever Committee, 1958 &amp; <sup>accompanying</sup> letter from NASA Historian</p> <p>a. Press Release, "Space Technology Committee Established by NACA", National Advisory Committee for Aeronautics, Washington, D. C. January 13, 1958. FILES</p> <p>b. "Launching Sites for Space", March 17, 1958 "</p> <p>c. <del>Interim Report to the National Advisory Committee for Aeronautics, Special Committee on Space Technology, A National Integrated Missile and Space Vehicle Development Program. The Working Group on Vehicular Program, April 1, 1958. (See 151-g)</del> "</p> <p>d. Report, Working Group on Instrumentation, NACA Special Committee on Space Technology, April 24-25, 1958. "</p> <p>e. W. B. Hebenstreit, <u>Maintenance of Inventory of Satellites</u>, Addendum to the report of the Working Group on Space Surveillance of the NACA Special Committee on Space Technology. June 27, 1958. "</p> <p>f. <u>Ground <del>XXXX</del> Environment for a National Civil Space Research Program</u> Report to the NACA Special Committee on Space Technology by the Working Group on Range, Launch, and Tracking Facilities assisted by Working Group on Space Surveillance and Working Group on Instrumentation. July 16, 1958. "</p> <p>✓ g. Report to the National Advisory Committee for Aeronautics Special Committee on Space Technology. <u>A National Integrated Missile and Space Vehicle Development Program</u>, by The Working Group on Vehicular Program, July 18, 1958. (See 151-c) "</p> <p>h. Report to the NACA Special Committee on Space Technology, <u>Space Surveillance Problems in a National Civil Space Research Program</u>, by the Working Group on Space Surveillance, August 14, 1958 "</p> <p>j. Report of the Working Group on Human Factors and Training to the Special Committee on Space Technology. October 27, 1958. "</p> <p>k. <u>Recommendations regarding A National Civil Space Program</u>, by the NASA Special Committee on Space Technology, October 28, 1958. "</p> <p>l. <u>Reentry and Recovery of Space Vehicles</u>, A Report on Recommendations to the Special Committee on Space Technology by the Working Group on Reentry. October 14, 1958. "</p> <p>m. Initial Report, Working Group of Re-Entry, Special Committee on Space Technology. (no date) "</p> <p>n. Report of the Working Group on Space Research Objectives, Special Committee on Space Technology. (no date) "</p>	
152.	<p>a. Jet Propulsion Laboratory, <u>Notes on Project Deal</u>, A. R. Hibbs, External Publication No. 471, March 14, 1958. FILES</p> <p>b. <u>The Evening Star</u>, Washington, D. C. February 5, 1959, p. B-12, "Coast Lab 'Birthplace' Of U.S. Rocket Power", by William Hines FILES</p>	
153.	Jet Propulsion Laboratory, California Institute of Technology, / <u>Juno</u> Pasadena: Jet Propulsion Laboratory. FILES	
154.	"Reach into Space," <del>XXXX</del> <u>Time</u> , May 4, 1959, pp. 64-70. FILES	

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155. Jet Propulsion Laboratory, Smith, W. W. "Hydrazine Unit Corrects Spacecraft Trajectories," Space/Aeronautics, 38/1, July, 1962, pp. 123-126. FILES
156. a. Letter from Frank J. Malina to John Reese, Temple City, Calif. dated 10 April, 1959. FILES  
b. Letter from Frank J. Malina to John Reese, Temple City, Calif. dated 20 April, 1959.
157. National Aeronautics and Space Administration, News release December 7, ~~KXX~~ 1958, 4:00 p.m., "Statement by Dr. William H. Pickering, Director, Jet Propulsion Laboratory" [Pioneer III data] FILES
158. Jet Propulsion Laboratory, California Institute of Technology, "Instrumentation in Pioneer III for NASA-IGY Probe". Pasadena: Jet PROPULSION Laboratory FILES
159. Jet Propulsion Laboratory, California Institute of Technology, Organization Chart, "Mariner Mars 1969 Project: Work Breakdown Structure and Data Index," Pasadena: Jet Propulsion Laboratory [also handwritten Mariner notes] FILES
160. "Major Results Achieved Through DSIF Tracking System Operation" [with penciled notation 11-16-62, John Thatcher] FILES
- 7 a. Jet Propulsion Laboratory, two mimeographed sheets, chart, "Jet Propulsion Laboratory, Chronology of Significant Events 1936 through 1966" FILES  
b. Jet Propulsion Laboratory, two mimeographed sheets, Recruitment Brochure "Significant JPL Accomplishments"  
c. Jet Propulsion Laboratory, two mimeographed sheets, "Chronological Summary of the Important Achievements of the Jet Propulsion Laboratory"  
d. Jet Propulsion Laboratory, two mimeographed sheets, "Chronological List of JPL 'Firsts'"
162. Message of the President scheduled for delivery to the Congress February 2, 1959 (for release at 12:00 noon EST). FILES
163. a. News release from California Institute of Technology, Jet Propulsion Laboratory, Pasadena, California [re: Sergeant, Liquid & Solid Developments] No date [1960?] Pasadena, California FILES  
b. News release from California Institute of Technology, Jet Propulsion Laboratory, Pasadena, California [re: Sergeant] No date, Fort Benning, Ga. FILES  
c. Photo of Sergeant, JPL photo numbers 61634, 311-3851A
164. Photo of Corporal, JPL photo number 15-1769a, and descriptive copy FILES
165. News Release from Office of Public Information, Jet PROPULSION Laboratory, California Institute of Technology, NASA, Pasadena, California. Nasa Defers Voyager; Schedules Three New Mariners. December 22, 1965. FILE
- 7 a. News Release, California Institute of Technology, Jet Propulsion Laboratory, Pasadena, California, for release Thursday, Oct. 8, A.M. [Pioneer IV and Tracking Activity], including preliminary launch & orbit data. FILES  
b. 7 Color photo of Pioneer IV, James Van Allen, unidentified person, and Wernher von Braun. FILES



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167.	Fact Sheet on the Transfer of Certain Facilities from Department of Defense to the National Aeronautics and Space Administration. [1959]	FILES
168.	"The Jet Propulsion Laboratory, by Dr. William H. Pickering, Director, reprint from the <u>Bulletin of C.I.T.</u> , (no date) pp. 44-48	FILES
169.	Jet Propulsion Laboratory, California Institute of Tekchnology, National Aeronautics and Space Administration, <u>SFOF: Space Flight Operations Facility</u> , Pasadena, California.	FILES
170.	Documents pertaining to dedication of SFOF and other buildings, May 14, 1964 <ul style="list-style-type: none"> <li>a. Interoffice Memo dated May 12, 1964 from G. Lairmore to Distribution Subject: Operations Plan for JPL Building Dedication</li> <li>b. Dedication Program of Jet Propulsion Laboratory Facilities, 5-14-64.</li> <li>c. NASA News release, for release about 2:45 P.M., PDT, 5-14-64. <u>Remarks on the Dedication of the Space Flight Operations Facility, Jet Propulsion Laboratory, Pasadena, California, May 14, 1964 by Homer E. Newell</u></li> <li>d. <u>Remarks of Senator Clinton P. Anderson, J.P.L. Dedication, 5-14-64</u></li> <li>e. News release, Office of Public Education and Information, JPL, 5-14-64</li> <li>f. News release, 5-14-64. <u>Remarks by Congressman George P. Miller</u></li> </ul>	FILES
171.	Partial list of events pertaining to Explorer, Pioneer, Minitrack and Microlock from January 31, 1958 to December 6, 1958.	FILES
172.	Rough draft of manuscript, "Antenna and Microwave Activities at the California Institute of Technology, Jet Propulsion Laboratory", 12-22-60, 15 pp.	FILES
173.	Miscellaneous newspaper clippings of Surveyor V, September, 1967. <i>Flight on Wal</i> <i>to Moon ---</i>	<del>FILES</del>
174.	Interview with Bob Breshears, SPAC, Oct. 13, 1967	FILES
175.	Interview with James D. Cloud, Hughes Aircraft Co., Oct. 16, 1967	FILES
176.	a. I.O.M. from J. F. McGee to R. Parks and J. Small dated Sept. 15, 1967 Subject: Commendation for Charles Pedretti b. Hughes News, Sept. 15, 1967	FILES
177.	United States Congress, Senate, Committee on Aeronautical and Space Sciences, Staff Report prepared for the Committee, <u>National Aeronautics and Space Act of 1958 as amended Through the End of the 87th Congress, October 13, 1962.</u> 87th Congress, 2nd Session, November 20, 1962, [Committee Print] Washington, D.C., <u>GPO</u> , 1962.	FILES
178.	Goddard Space Flight Center, Institute for Space Studies, Director, Robert Jastrow, <u>Results of Experiments in Space</u> , Presented as the 25th Wright Brothers Lecture for the Institute of Aerospace Sciences, Washington, D. C., December 18, 1961, Washington, D.C.: GPO, 1962.	FILES
	<u>The Airpower Historian</u> , Vol. X, No. 1, January 1963.	FILES
180.	<u>Lab-Oratory</u> , Vol. 17, No. 6, January, 1968. "Applications Technology Satellite Launch," R. Grippi, Sect. 381, p. 2.	LAB-ORAT BOOK

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182.	<u>Abstract of Improving Organizational Structure and Administrative Processes, Jet Propulsion Laboratory, September 1959, McKinsey &amp; Company, Inc., Mgmt Consultants, Los Angeles, Calif.</u>	FILES
183.	<u>"JUNO"-----"EXPLORER"-----Some Random Notes.</u> From material by J. H. Hinrichs Typed 4 February 1958. [Explorer I Launching].	FILES
184.	<u>"The Great Japanese Balloon Offensive,"</u> by Master Sergeant Cornelius W. Conley <u>Air University Review, February, 1968, pp. 68-83.</u>	FILES
185	Memorandum for Administrator (NASA) from Abe Silverstein, subject: Tentative Recommendations on Jet Propulsion Laboratory, September 25, 1958.	Files
186.	Original calculations performed by Dr. Homer J. Stewart relating to the JATO and Corporal Projects.	FILES
187.	Seifert, Howard S., Mark M. Mills and Martin Summerfield, Jet Propulsion Laboratory, "The Physics of Rockets," <u>American Journal of Physics</u> , Volume 15, No. 1, January-February, 1947, pp. 1-21.	FILES
188a.	Jet Propulsion Laboratory, Technical Memorandum 33-281 JPL 614 5-15 "Welcome to Edwards Test Station: Visitor's Guide." 1967-1968.	FILES
188b.	Map of Edwards Test Station, November, 1967.	
189	Lawrence Curran, "JPL up in the air over space role" <u>Space Electronics.</u> <u>Electronics</u> , April 1, 1968	FILES
190	DEFENSE DEPARTMENT, NASA AGREE ON USE OF ARMY SPACE RESOURCES, News release from Department of Defense, Office of Public Information. December 3, 1958	Files
191	Joint Statement by Dr. Lee A. Dubridge, President of the California Institute of Technology, and Dr. William H. Pickering, Director, Jet Propulsion Laboratory, California Institute of Technology [n.d., by context, approximately December 1958]	Files
192	Statement by Dr. William H. Pickering, Director, Jet Propulsion Laboratory, California Institute of Technology [Dec. 1958] regarding the transfer of the JPL, Caltech to NASA	Files
193	Memorandum for Discussion, from John J. Corson of McKinsey & Co., Inc. Management Consultants to Dr. T.K. Glennan, Administrator, dated Dec. 8, 1958, Subject: Next steps in organization of the National Aeronautics and Space Administration [and proposal to conduct study]	Files

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194	Letter to Dr. T. Keith Glennan from McKinsey & Co. Inc., Management Consultants, dated December 18, 1958, referring to their memo of Dec. 8, 1958[3-193]. This letter describes organizational problems requiring attention.	Files
195	Letter Supplemental Agreement from NASA to McKinsey and Company, Inc. dated Feb. 3, 1959. This adds Amendment No. 1 to the NASA Contract NASw-1, dated Oct. 10, 1958.	Files
196	Rough Draft , dated 10 October 1958, written for D. Quarles, "Possible Statement of Mission for Jet Propulsion Laboratory."	Files
197	NASA Document, [JPL Transfer News Release], dated Dec. 3, 1958, Fact Sheet on the Transfer of Certain Facilities from Department of Defense to the National Aeronautics and Space Administration and NASA-Army Agreement on use of ABMA facilities.	Files
198	IOM No. 44, to Senior Staff, etc. from W.H. Pickering, dated April 20, 1960, Subject: Laboratory Manpower Situation.	
199	Letter <del>mf</del> from Milburn of NASA to W.H. Pickering, dated August 2, 1963 Subject: Manpower ceiling at JPL	
200	Interview with Barney Huber (May 21, 1968) concerning JPL Systems Engineering and Management concepts in the early 1960's.	<del>xxxx</del> Files
201	NASA Organizational Chart as of Dec. 18, 1967	Files
202	A History of the NACA Langley Laboratory 1917-1947 by Michael David Keller, U of Arizona (comment draft)	<del>dx</del> Dr. Emmet
203	Letter to Col. Pickard of the Corp. of Engineers, Army from John A. Johnson, Gen. Counsel re: Acquisition of Goldstone Test Station by NASA from JPL .	Files
204	Memo for the Fiscal Officer from <del>Ex</del> Kurt Berlin, Office of General Counsel, Subject: Services in connection with acquisition of land.	Files
205	Memo for Director of Business Admin.,. from Kurt Berlin, Office of General Counsel, Subject: Report of Negotiation for Acquisition of 7.19 acres of land for the JPL.	Files
206	Theodore von Karman with Lee Edson, <u>The Wind and Beyond</u> , Theodore von Karman Pioneer in Aviation and Pathfinder in Space, Little, Brown and Co.	Library <i>File</i>
207	Bibliography of Reports, from Aerojet Engineering Corp. from 1943 to 1944	Files
208	Memorandum for Administrator, from Abe Silverstein, Subject: Comparisons of Plans for Beltsville with ABMA and JPL Capability, September 25, 1958.	"

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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
209	Letter from Martin Summerfield dated Oct. 7, 1968 to Dr. Pickering declining invitation to the Commemorative ceremony.	Files
J210	<u>This Week</u> , Oct. 21-25, 1968, showing appointments of cognizant personnel to Mariner Mars '71.	"
211	Interview with Dr. Frank Malina, Oct. 29, 1968.	
212	The Lockheed Star, Friday Nov. 8, 1968	"
213	Brochure of commemorative plaque, Oct. 31, 1968	"
214	NASA Launch Schedules	"
215	NASA SP-4006, <u>Astronautics and Aeronautics, 1965, Chronology</u>	
216	On Science & Technology, foreword by James E. Webb, Jan. 1965	Shelf
	NASA SP-4007, <u>Astronautics and Aeronautics, 1966, Chronology</u>	Shelf
	On Science, Technology and Policy, foreword by Eugene M. Emme, NASA Historian, 1967.	
217	NASA SP-4008, <u>Astronautics and Aeronautics, 1967, Chronology</u>	Shelf
	On Science, Technology, and Policy, foreword by Homer E. Newell, Associate Administrator, NASA, 1967.	
	IOM	
218	<del>Letter</del> , dated Jan. 12, 1959 from Dr. Pickering to All Supervisors Subject: Formation of Reliability Section.	Files
	IOM	
219	<del>Letter</del> dated Feb. 11, 1959 from J.E. Froehlich to All Supervisors Subject: Name for Space Vehicle [Vega]	"
220	IOM, dated April 13, 1959 from W.H. Pickering to Supervisor Personnel subject: Resignation of Dr. J.E. Froehlich	"
221a	IOM from W.H. Pickering to Distribution dated 4/29/59, subject: Basic Policy and Principles Governing the Operation of the JPL	"
221b	Statement of Objectives dated 4/29/59 of the Laboratory	(See 3-348 for 1963 edition)
222a	IOM from W.H. Pickering dated June 1, 1959 to Distribution Subject: Study by McKinsey and Company	
222b	The McKinsey Study dated May 26, 1959, Subject: Improving the Organization and Management of the JPL	"
223	IOM from W.H. Pickering dated 6/25/59 to Distribution, subject: The Attainment of Reliability	"

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<u>Book No.</u>	<u>Title</u>	<u>Location</u>
224	IOM, Announcement No. 1 dated July 14, 1959 from W.H. Pickering to Distribution, Subject: Organizational Change	"
225	IOM, Announcement No. 2, July 14, 1959 from W.H. Pickering to Distribution, Subject: Establishment of Space Science Division	"
226	IOM No. 6 dated Aug. 4, 1959, from W.H. Pickering to Distribution Subject; Visit of National Aeronautics and Space <del>Council</del> Council to JPL on Aug. 5, 1959.	"
227	IOM #7 dated Aug 4, 1959 from W.H. Pickering to Distribution Subject: (Attached Draft Regarding Role of JPL and (2) McKinsey Study Regarding Role of JPL.	"
228	IOM Announcement No. 3 dated Aug. 12, 1959, from W.H. Pickering to Distribution, Subject: Vega Program Director [Cummings]	"
229	IOM #8 dated Sept. 15, 1959, from W.H. Pickering to Distribution Subject: Concluding meetings with McKinsey & Co.	"
230	IOM dated Sept. 22, 1959 from W.H. Pickering to Distribution Subject: Draft of Proposed NASA-JPL Relationships.	"
231	IOM dated Sept. 22, 1959 from W.H. Pickering to Distribution Subject: Laboratory Organizational Study	"
<del>232</del> 232	IOM dated Sept. 23, 1959 from W.H. Pickering to Dist. Subject: Division Charters.	"
233	IOM #9 dated Sept. 24, 1959 from W.H. Pickering to Dist. Subject: Roles of Program Directors and Division Chiefs.	"
234	IOM #10 dated Sept. 24, 1959 from W.H. Pickering to Dist. Subject: Organization and Management Study	"
235	IOM #13 dated Oct. 7, 1959 from Dr. Pickering to Dist., Subject: Final Report on McKinsey Study.	"
236	IOM Announcement No. 6 dated Nov. 19, 1959 from Dr. Pickering to Dist. Subject: Procurement Division.	"
237	IOM Announcement No. 8 dated Nov. 20, 1959 from Dr. Pickering to Dist., Subject: Planning Staff	"
238	IOM Announcement No. 7 dated Nov. 23, 1959 from Dr. Pickering to Dist., Subject: Establishment of Telecommunications Div.	"
239	IOM Announcement No. 11, dated Dec. 2, 1959 from Dr. Pickering to Dist., Subject; Appointment of Sergeant Program Deputy Director and Abolishment of Development Support Division.	"
240	IOM Announcement No. 14, dated Dec. 11, 1959 from Dr. Pickering To All Personnel, Subject: Cancellation of Vega Program	"
241	IOM #16 dated Dec. 16, 1959 from W. Pickering to Dist. Subject: Realignment of the Lab's <del>Rita</del> Plans and Programs.	"

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242	IOM dated Sept. 24, 1959 from Dr. Pickering to All Personnel Subject: Vega Deputy Director	" Files
243	Announcement No. 5 from Dr. Pickering dated Nov. 18, 1959 to Dist. Subject: Establishment of Systems Division.	"
244	Announcement No. 15 dated Dec 21, 1959 from Dr. Pickering to Dist. Subject: Establishment of Systems Design Section.	"
<del>245</del> 245	<u>New York Times</u> , April 27, 1965, "Panel Urges Landing on Mars to Seek Signs of Life," also, "Mars Plan Recommendations."	"
246	IOM to Distribution from W.H. Padgham, dated Jan. 20, 1958 attaching employment charts through 1957.	"
247	Pamphlet through June 1958, giving Plant Valuation, Inventory Values, Total Employment, etc.	"
248	Biographical Info on Dr. Stewart dated in the late 1950's	"
249	IOM #40 dated March 31, 1960, from W.H. Pickering to All Personnel, Subject: Laboratory Manpower Situation.	"
250	Early photos of the lab (1943)	"
251	Historical Achievements at JPL (illustrated page)	"
252	June 1945 and Sept. 1946 copies of the <u>Journal of the British Interplanetary Society</u> .	"
253	The following copies of <u>Astronautics</u> , Sept. 1934, Oct. 1935, Oct. 1937, July 1938, Aug. 1939, Spring 1955.	"
254	<u>Pacific Rockets</u> , September 1946 issue	"
255	<u>Rocket Development</u> , by Dr. W.H. Wheeler, 1946	"
256	The following copies of <del>Astronautics</del> Astro-Jet, Sept. 1944, Dec. 1945, Nov. 1946.	"
257	"Our Moon, How the Army Came Through," <u>Newsweek</u> , Feb. 10, 1958	"

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258	Publication No. 5, "The Problem of Escape <del>xxx</del> from the Earth By Rocket," F.J. Malina and M. Summerfield, JPL Doc. Aug. 23, 1946	"
259	Publication No. 11, "The Present Status of the Guided Missile," H.J. Stewart, JPL Doc. July 8, 1947.	"
260	Publication #8, "Study of the Upper Atmosphere by Means of Rockets," W.H. Pickering, JPL Doc. June 20, 1947.	"
261	JPL Document, "Research and Development at the Jet Propulsion Laboratory," June 22, 1946.	"
262	JPL Document, "Jet Propulsion, Its Effect Upon Engineering Education," Publication No. 2, by Frank J. Malina, Feb. 20, 1946.	"
263	"Long-Range Planning for the Deep-Space Network," by E. Rechtin, JPL AIAA Paper 67-975, Meeting at Anaheim, Oct. 23-27, 1967.	"
264	Memorandum No. 4-6, "Scale Model Flight <del>EXX</del> Tests of ORDCIT Winged Missiles, by C.B. Millikan, JPL Document April 8, 1945.	"
265	JPL Document, "Minutes of Briefing on the Occasion of the Visit <del>xxx</del> of U.S. Sen. Rob't S. Kerr, Chairman of the Senate Committee on Aeronautical and Space Science and James E. Webb, Admin, NASA to Jet Propulsion Laboratory," Oct. 3, 1961. Document dated Oct. 20, 1961.	"
266	<del>The Physics of Rockets, by Howard S. Seifert, Mark M Mills and Martin Summerfield, as reprinted from the American Journal of Physics, Vol. <del>15</del> 15, Jan.-Feb. 1947.</del>	"
267	Document, NASA position paper, Glennan's office, September-October, 1958, Files which includes recommending transfer of ABMA-JPL.	
268	"The JPL Story, H.L. Nieburg, from the <u>Bulletin of the Atomic Scientists</u> "	"
269	Ordnance Corps. Blueprint of Explorer I and II Outline, Dwg. D 42147 dated 3/19/58.	"
264	Complete Specification of Rocket Motor from Frank Malina, 1935	"
266	Newspaper Articles on Missiles and Rockets, including (1) Missile Program Dwarfs that of First Atomic Bomb, and (2) Breakup of Fames German <del>Ex</del> Rocket Expert Team Feared. [1957]	"
270	Voyager Notes, by Dr. D. Burcham, dated 1/23/66.	"
271	File on Manpower/Management Negotiations with OSSA, Oct.-Dec. 1966	Bookshelf.
272	"JATOS Get Em Up," from <u>The Saturday Evening Post</u> , by Frank J. Taylor, Files May 15, 1945.	

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Book #	Title	Location
273	Report on German Long Range Rocket, by Prof. L.F. Woodruff and Capt. G.H. Drewry, Jr., Aug. 16, 1944.	Files
274	"On Heat Resistant Material Problems in the Ram Jet Engine," By Bruce S. Old, Lt. Cmdr., USNR, June 12, 1945, [F. Malina Files]	"
275	"20 Million lb. Thrust Engine Foreseen," by Michael Yaffee, <u>Aviation Week</u> , Feb. 9, 1959.	"
276	Index to Articles in ASTRONAUTICS 1930-1940 [F. Malinas file]	"
277	Pages from various issues of <u>Aviation Week</u> , 1957 and 1958 on missiles and rockets. [F. Malinas files]	"
<del>278</del>	<del>xxxxxxx Employment Reports, 1957, [Charts and Graphs] xx</del>	"
278	The Caltech Alumni, A Survey, by John R. Weir, reprinted from <u>Engineering and Science Monthly</u> , Dec. 1951	"
279	Clippings, Magazine Articles and notes from F. Malina's files of the late <del>1930's</del> , <del>1940's</del> and 1950's.	"
280	Book entitled "Facts & Facilities with Photos and Figures," prepared by Bob Byer, giving valuation, population figures and data on the lab in the forties.	"
281	<u>Missile/Space Daily</u> , Oct. 27, 1965, article on Surveyor on page 295 and article on OGO II on page 297.	"
282	Letter from Dr. Malina to W.H. Pickering, June 10, 1958 with attachment on WAC Corporal.	"
283	Summary of the Voyager Program, Jan. 1967 [NASA document]	"
284	<u>Astronautics and Aeronautics, 1968, Chronology on Science...1969.</u>	Shelf
285	<u>Astronautics and Aeronautics, 1969, Chrono. on Science, Tech. &amp; Policy</u> 1970	Shelf
286	<u>Astronautics and Aeronautics, 1970, Chrono. on Science, Tech. &amp; Policy</u> 1972	Shelf
287	<u>Astronautics and Aeronautics, 1971, Chrono. on Science, Tech. &amp; Policy</u> 1972	Shelf
288	<u>Mariner-Mars, An Interplanetary Spacecraft</u> , JPL Bulletin	"
289	Voyager, by D.P. Hearsh NASA, OSSA from <u>Astronautics and Aeronautics</u> May 1965.	"
290	<u>Plant Engineering</u> , November 1967 issue, "Plant Engineering Finds Routine Projects Rare at JPL."	"



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No.	Title	Location
291	Paper by Hugh Dryden: "Possible Statement of Mission for Jet Propulsion Laboratory. (Establish; Mission; Action; Timing, October 10, 1958.	Files
292	Lab Oratory, February 1958 Issue	"
293	December 29, 1967 issue of <u>Science</u> , "Mariner V"	"
294	"The Rocket Pioneers," Memoirs of the infant days of rocketry at Caltech," by Frank J. Malina, from <u>Engineering &amp; Science</u> Feb. 1968	
295	Letter dated 1/3/69 from Gustave Eckholm to the Laboratory, asking for a picture of Goldstone. He worked at Goldstone in 1944 for Caltech.	
296	<u>DR. Frank Joseph Malina</u> , by Scholer Bangs, 2/5/69. Mr. Bangs' interview of Dr. Malina in the fall of 1938.	"
297	Statement, Office of the Administrator; JPL Transfer, Circa October, 1958.	"
298	Letter dated Jan. 6, 1968 to Dr. Thompson, Director of Langley, from James E. Webb discussing Apollo.	"
299a	Letter dated Feb. 15, 1968 from Webb to Thompson, enclosing final rewrite of announcement of Thompson's new position as Spec. Assistant to the Administrator.	"
299b	Special Announcement, dated 2/16/68 as above.	"
300	Memorandum for the Administrator of NASA dated July 20, 1968, Subject: Report of the Post Apollo Advisory Group [enclosure].	"
301	Memorandum for Dr. Thompson, Special Assistant to the Administrator Subject: Acceptance of Report of the Post-Apollo Advisory Group.	"
302	"Jet Propulsion Lab Probes Other Planets Seeking Signs of Life," from <u>The Wall Street Journal</u> , Feb. 21, 1969, by William E. Blundell	"
303	"JPL Receives Grant to Apply new Techniques in Improving X-rays, from <u>The Ledger</u> , Feb. 20, 1969.	"
304	NASA letter from T. Keith Glennan to Hon. Neil H. McElroy, Secretary of Defense, Washington 25, D.C. October 15, 1958.	"
305	Memo for Mr. Cortright from Earl D. Hilburn, Deputy Assoc, Admin., dated 4/4/66, Subject: JPL Publications and other Public Releases.	"
306	James H. Wilson, "Mariner Mayday: Three Weeks in Nov. 1964," Submitted to the 1968 Goddard Historical Essay Competition of the National Space Club.	"
307	Letter dated 4 March 1969 to R. C. Hall from A.B. Christman, regarding NOTS.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
3-8	Interview with J.J. <del>Rukx</del> Burke by R.C. Hall, March 11, 1969	Files
309	Letter dated April 1, 1969 from Howard S. Seifert to <del>xxx</del> Mr. Hall, Historian, stating attendees to the GALCIT conference for the 1941-44 period.	"
310	"Chronological History of Army Activities in the Missile/Satellite Field 1943-1958," Headquarters, Dept. of the Army, Sept. 1958, Dept. of the Army Pamphlet 70-10	CDC
311	"Long Range Planning Study, No. 2 (Aeronautics), G. Herrera, April 1969, (Includes section on History and Background of the Aerodynamic Facilities Section and the History of the Wind Tunnel.)	Files
312	Caltech memorandum from N.H. Horowitz, to Committee on Aims and Goals Subject: <del>JRR</del> JPL, dated June 4, 1969	"
313	Facilities Office Status Reports, from Week of Sept. 4, 1964 to Dec. 11, 1964 [To Dr. Pickering from H.W. Norris and B. Sparks.]	"
314	Memo to Director of Business Admin and Director of Space Flight Dev. dated Nov. 16, 1959, from Richard Horner, Subject: Relationships with Calif. Inst. of Tech. and Jet Prop. Lab.	"
315	U.S. House of Representatives, 88th Congress, Second Session, Serial I, "Report of the Subcommittee on NASA Oversight of the Committee on Science and Astronautics, <u>The NASA-DOD Relationship</u> , GPO, Washington, 1964	
316	U.S. House of Reps, <del>88</del> 87th Congress, Hearings before the Committee on Science and Astronautics, <u>Defense Space Interests</u> , Mar. 17, 18, 20, 21, and 23, 1961. [No. 8] GPO, Wash. 1961.	"
317	Weekly Report of QA and R Office to Dr. Pickering/B. Sparks, from Brooks Morris, from July 6, 1964 to Jan. 4, 1965.	"
318	Results of Meeting of Pickering, Cummings, Hyatt and Buckley, 5/27/59	"
319	NASA, Transcript of Proceedings, Discussion between Oran W. Nicks, Benjamin Milwitzky, and Lee R. Scherer of NASA and members of the National Academy of Public Administration, Wash. D.C. Sept. 12, 1968	Bookcase
320	W.H. Pickering, "Man in Space," presented at Second Annual AFOSR Astronautics Files Symposium, Denver, Colorado, April 29, 1958	Files
321	J.J. James, "The Evolution of the Mariner Spacecraft," presented at the XVIII Congress of International Astronautical Federation, Belgrade, Yugoslavia September 24 to 30, 1967	"
322	Minutes of Briefing on the Occasion of the visit of LB Johnson, VP, 10/4/61	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
323	<u>A Plan for Manned Lunar and Planetary Exploration</u> , by Allyn B. Hazard, JPL, November 1959	Files
324	Copies of JPL <del>Annual</del> Annual Report, beginning 1965	"
325	Copies of Caltech Annual Report, THE PRESIDENT'S REPORT	Shelf
326	<u>The History of the ORBIT Project</u> up to 30 June 1946, arranged by Capt. R.C. Miles	Files
327	Dr. L.A. Dubridge, Farewell Address at JPL, Jan. 9, 1969	"
328	Mariner Mars 69 Project Status Reports, from Sept. 11, 64 to Dec. 21, 64 from D.P. Burcham to Dr. Pickering	"
329	Mariner 64 Project Status Reports, from 8/28/64 to 12/12/64, from J.M. James to Dr. Pickering.	"
330	Letter dated Oct. 9, 1958 from Glennan to McElroy, in which Glennan suggests that there be a full exchange of info between NASA and DOD.	"
331	Letter dated Oct. 29, 1958 from D.A. Quarles to Glennan, outlining views of the DOD with respect to method of handling assignments of work to be done for NASA by Defense activities.	"
332	Letter dated Nov. 3, 1958 from D. Quarles to Glennan, answering Glennan's Oct. 9 letter, he is in agreement with keeping DOD and NASA fully informed with respect to astronautical and space activities.	"
333	Letter dated Nov. 24, 1958 from W.L. Hjernevik of NASA to Gen. L.L. Lemnitzer" Chief of Staff, U.S. Army, attaching preliminary draft of "Proposed Transfer of Certain Dept. of Defense Facilities to the NASA."	"
334	Letter dated 5 Dec. 1958 from Glennan to D.A. Quarles, enclosing copy of letter of same date to W.M. Brucker expressing appreciation for cooperative <del>work</del> manner in which Army Staff worked with NASA on ABMA-JPL matter.	"
335	Letter dated Feb. 11, 1959 from Glennan to N.H. McElroy, suggesting a method be implemented to permit NASA contractors to avail themselves of ASTIA data (and access to ASTIA buildings) the same way that DOD contractors do.	"
336	Letter dated Feb. 28, 1959 from H.F. York to Dr. Glennan, answering letter of Rx Feb. 11 stating that the DOD will act favorably to his request to provide NASA contractors with the services of ASTIA.	"
337	Memo dated Mar 30, 1959 from L.I. Baird, NASA Vanguard Div. to R.L. Bell, NASA Security Officer, Subject: "Need-to-know relative to WS-117L, for personnel of the Beltsville Space Center.	"
338	Letter dated April 3, 1959 from D.A. Quarles to Dr. Glennan, modifying the <del>proposed</del> proposed procedures for disseminating info on East Coast Satellite and Space Probe Launchings.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
339	Letter dated April 9, 1959 from Glennan to D.A. Quarles, concurring with changes recommended for East Coast Satellite and Space Probe Launchings.	Files
340	CUCOSS History File	"
341	IOM 23 June 1969 from J.D. Burke to F.H. Felberg, Subject: Lunar Program Prospectus	"
342	IOM No. 74, Aug. 28, 1961 from B. Sparks to Senior Staff, Subject: Manned Lunar Landing Program Studies.	"
343a	IOM 12-69 dated Mar. 17, 1969 from the Deputy Director to Senior Staff, enclosing Memo of Understanding between NASA and Caltech on Dec. 11, 1968.	"
343b	Memo of Understanding between NASA and Caltech, Dec. 11, 1968.	"
344	Index of Files of the Executive Secretariat as of August 1969.	"
345	Document dictated by Crabill (LRC) 4/20/64, ref:	"
<del>345</del>	Memo to NASA, Code S, Att: Homer E. Newell from Langley Director, Subj: Request for additional support for lunar Orbiter from JPL, dated April 2, 1964	"
346	Technical Report No. 32-352, All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions," A special staff report., M. Summerfield, J.I. Shafer, H.L. Thackwell, Jr. and C.E. Bartley, Oct. 1962, reprinted from <u>Astronautics</u> , Oct. 1962	"
347	Proposal for a Jet Propulsion Experimental Station at the Guggenheim Aeronautical Laboratory of the California Institute of Technology, April 18, 1939.	"
348	Dr. Pickering, "Principles Governing the Management and Operation of the Jet Propulsion Laboratory, Feb. 21, 1963 [See 3-221 for 1959 edition]	"
349	Document, NASA, <u>Suggested Program for Implementation of Proposal Made to Hon. Neil H. McElroy, Secretary of Defense on October 15, 1958.</u>	"
350	Progress Report on Bumper Vehicle, General Electric, No. R50A0501, Feb. 1950," by R.P. Haviland, <u>PROGRESS REPORT ON BUMPER VEHICLE--A TWO-STAGE ROCKET--<del>XXXXXXXXXX</del> POWERED TEST VEHICLE</u>	"
351	Interview with Robert Rypinski Feb. 11, 1969 re: JPL History	"
352	<u>This Week</u> , Sept. 15-19, 1969, appointment of Schurmeier as Deputy Ass't Lab Director for Flight Projects effective Sept. 15, 1969.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
353	Letter dated 10 Sept. 1969 from N. Renzetti to Frank <del>ANREXX</del> Anderson which critiques "History on GSFC Networks".	Files
354	<del>z</del> <u>JPL Five Year Plan</u> , 500-21, Sept. 8, 1969, OPP Report 69-11	"
<del>355</del> <del>355X</del>	Report No. 20-100, <u>The Corporal: A Surface-to-Surface Guided Ballistic Shelf Missile</u> , W.H. Pickering, Mar.17, 1958	
356	<u>The <del>Hx</del> Jet Propulsion Laboratory: Background, Resources and Capabilities</u> Files March 1, 1969	
357	<del>10MXX</del> Memorandum dated April 8, 1960 from Frank E. Goddard, Ass't Director for NASA Relations, to R. E. Horner Assoc. Admin, of NASA, Subject: The Sergeant Program and its Problems.	"
358	Letter dated July 13, 1961 from Dr. Pickering to Dr. Silverstein, regarding evaluation of STL proposal with suggestion by Dr. Pickering that JPL be project manager for this project.	"
359	Letter dated Aug. 23, 1961 from Dr. Silverstein to Dr. Pickering, setting forth in an enclosure (not attached) reporting requirements for R&D tasks for spacecraft.	"
360	Letter dated Aug. 28, 1961 from W.H. Pickering to Dr. Silverstein, giving proposals in view of Centaur schedule delay.	"
361	Letter dated Sept. <del>25, 1961</del> 14, 1961 from A. Silverstein to Dr. Pickering confirming approval of program changes recommended in Dr. Pickering's Aug. 28 letter.	"
362	Letter dated Sept. 29, 1961 from Dr. Pickering to Dr. Silverstein, regarding additional facilities for the Lab.	"
363	Letter dated Oct. 12, 1961 from Dr. Silverstein to Dr. Pickering, regarding funding for construction of additional facilities.	
364	Letter dated Oct. 24, 1961 from F.E. Goddard Jr. to E.M. Cartright, discussing funding for the future.	"
365	Letter datéd Oct. 26, 1961 from R.J. Parks to W.D. Escher, of the Office of Launch Vehicle Systems, NASA, giving information for inclusion in the minutes of the 24 Oct. Centaur Management Coordinating Committee meeting.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
366	<u>Summary of JPL Society-Oriented Activities</u> , Dave Shaw, Nov. 1969	Files
367 <del>xxx</del>	Letter dated Aug. 10, 1961 from E.W. Brackett, Director, Procurement and Supply of NASA to WOO, att: Earle Sample, Subject: JPL Contracts with Foreign Contractors.	"
368	Memo for Dir. of Research Grants and Contracts dated 2 Nov. 1961, from Paul J. Coleman Jr., Head, INterplanetary Sciences Program, Lunar and Planetary Programs, OSS, Subject: Disposition of Mariner -B Proposals.	"
369	Letter from Homer E. Newell, Director of OSS, 12 Dec. 1961, to Dr. Carl Sagan UC Berkely re: Mariner 6 <del>4</del> science.	"
370	Memo dated May 3, 1962 from Oran Nicks, Dir. Lunar and Planetary Prog. OSS, Memo for Director or Program Review and Resources Management, Subject: Advanced Approval for FY 1963 Programs.	"
371	Memo to SL Staff dated 1 June 1962 from O.W. Nicks, subject: Visit to Ames and JPL <del>Mayxxx</del> May 23 and 24.	"
372	Letter dated July 30, 1962 from O.W. Nicks to Brian Sparks regarding proposed modifications to the Consolidated Electrodynamics buildings.	"
373	Memo for Director, Lunar and Planetary Programs, dated 20 Dec. 1962 from Fred. D. Kochendorfer, Chief, Mariner Program, LUNar and Planetary Programs, OSS, Subject: Planetary Program Discussions, 17 Dec. 1962.	"
374	IOM dated 5 Oct. 1966, from J.N. James to All Concerned, Subject: Systems Which Failed Catastrophically on JPL Missions	"
375	Document dated 3/4/64 entitled, JET PROPULSION LABORATORY, NASA Relationship and Responsibilities	"
376a	IOM dated Oct. 26, 1962 from W.H. Pickering to Senior Staff, <del>Subjectxxx</del> Subject: Notes of Presentation at NASA 7th Management Conference, Oct. 4-5 1962.	"
376b	Enclosure to above entitled, "Notes of the Presentation at the NASA 7th Management Conference at Langley Research Center, Oct. 4-5, 1962	"
377	News Release from The White House dated Nov. 13, 1969, entitled, George M Low nominated Deputy Administrator of NASA.	"
378	Document dated May, <del>1947</del> 1947, entitled, Corporat E-1, ORDCIT Round 31 Firing Schedule for X-Day.	"
378	Document dated 4 Nov. 47, Operating Instructions, RDT30TI ORDCIT, Round 34 (Corporal E) <del>10000</del> 1000 Hours, 4 Nov. 1947.	"

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<u>No.</u>	<u>Title</u>	<u>Location</u>
380	NASA memo from Elliot Mitchell, Chief, Solid Rocket Development, for Mr. Hyatt, dated Feb. 10, 1959, Subject: Solid Propellant Propulsion Program at JPL.	Files
<del>381</del>		
381	NASA Memo to M. Rosen, From R. Snodgrass, 10 Feb. 1959, Subject: JUNO V Conference Report.	"
382	NASA Memo to Director, Space Flight Development, from <del>Mr</del> A.O. Tischler dated April 6, 1959, Subject: FRF Test Facility Site Selection Survey for Centaur and Vega vehicle <del>projects</del> projects.	"
383	NASA memo dated 24 April 1959, from Abe Silverstein, Director of Space Flight Development, to the <del>Mr</del> Director of Aeronautical and Space Research, Subject: Altitude starting tests of Vega second-stage engine (X-405-H)	"
384	NASA memo dated 27 April 1959 from Abe Hyatt, Ass't Dir. for Propulsion to Procurement and Supply Division, Subject: G.E. Contract NASw-301 quality control and technical inspection of	"
385	NASA memo dated 14 May 1959 from A.O. Tischler to Col. D. <del>Max</del> Heaton, Subject: High-energy <del>propellant</del> propellant rockets	"
386	Letter dated Aug. 31, 1959 from Abe Silverstein to Dr. Pickering, re: testing of the 6K engine at Lewis Research	"
387	NASA Memo 16 Sept. 1959 from Abe Hyatt to Drs. Glennan, Dryden, Silverstein and Mr. Horner, Subject: First Successful long duration firing of the Centaur Engine.	"
388	NASA memo dated 17 Sept. 1959 from M. Savage to A.O. Tischler, Subject: Discussions with D. Wyatt and D. Williamson, FY 1961 write-ups.	"
389	NASA memo Sept. 25, 1959 from Mr. Mitchell to Mr. <del>Mya</del> <sup>Hyatt</sup> , Subj: JPL Fy '60 Funding	"
390	NASA memo 9 Oct. 1959 from O. Bessio to Abe. Hyatt, Subject: G.E. engine for Vega-LOX pump explosion	"
391	NASA Memo 13 Oct. 1959 from O. Bessio to Abe Hyatt, Subject: <del>Mr</del> Comments on Status of Engine development for Vega.	"
392	<del>qzMAz</del> NASA document Oct. 19, 1960 entitled JPL BUDGET INFORMATION, AND ACTIVE JPL PROGRAMS IN SOLID PROPELLANT FIELD (as of Oct. 1960)	"

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No.	Title	Location
393	GALCIT Report No. 4-21, DESIGN AND FABRICATION OF THE WAC <del>XXXXXXXXXX</del> CORPORAL MISSILE, BOOSTER, LAUNCHER, AND HANDLING FACILITIES, W.A. Sandberg, W.B. Barry, ORDCIT Project, Feb. 19, 1946	File
394	Memo, Dept. of Defense, from Wilber M. Brycker, Sec'y of the Army, "Army Position Paper," Ca. October 15, 1958.	"
395	Harold Brown, "Can Excellence be Managed?" Feb., 1970 issue of <u>Engineering and Science</u> [View on JPL Caltech Operations]	"
396	EPD 209, Rev. 1, Jan. 1966, Numerical Listing of Engineering Planning Documents	Shelf [Bibliography]
397	IOM 4/6/61 from J.H. Keyser to B. Sparks, Subject: AMA Briefing on Management Control Techniques [History and application of PERT, possible use for JPL]	Files
398	Memo from the Association of the United States Army, 1958 Annual Meeting, Resolution No. 1. "Army Ordnance Missile Command," dated October 22, 1958.	"
399	NASA Memo to Dr. Seamans, 8/6/63 from R.W. Long, Code A-6, Subject ; Jet Propulsion Laboratory, Facilities Program.	"
400	NASA memo dated Sept. 10, 1963 from H.E. Newell to the Deputy Associate Administrator, subject: Manpower Utilization at JPL.	"
401	Letter Oct. 8, 1963 from E.D. Hilburn, Deputy Associate Admin., NASA, to Dr. DuBridge informing him of Dr. Newell's role in CALTECH-NASA Relations	"
402	Letter, June 15, 1964, from E.D. Hillburn, Deputy Assoc. Admin, NASA, to R.B. Gilmore, Caltech re the improvement program [CIT-JPL]	"
403	Memo from E.D. Hilburn dated Feb. 15, 1965 to Assoc, Admin for Space Science and Applications, Subject: JPL Fee Negotiations	"
404	EPD-345, AN APPROACH TO SPACECRAFT SYSTEM COST ANALYSIS, 7 Feb. 1966	"
405	U.S. Congress, House of Reps. <u>Independent Offices and Dept. of Housing and Urban Development Appropriations for 1968-1969</u> , Hearings before a Subcommittee of the Committee on Appropriations, 90th Congress, 2nd Session, Part 2, 1161, Feb 19, 1968	"
406a	Memo to the Executive Committee dated 12 Oct. 1945 from Acting Director Guggenheim Aeronautical Laboratory, [signed by Clark Millikan] enclosing the following document:	"
406b	Document dated Oct. 1945, THE FUTURE DEVELOPMENT OF THE AERONAUTICS DEPARTMENT AND GUGGENHEIM LABORATORY AT THE CALIFORNIA INSTITUTE OF TECHNOLOGY.	"



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<u>No.</u>	<u>Item</u>	<u>Location</u>
407	NASA, Memo to file from J.F. Clark, 2 Dec. 1958, Subject: Conference on this date between Dr. E. Stuhlinger of ABMA and H. Newell, J. Clark, L. Lindsay, and H. LaGow of NASA [Concerning ABMA-JPL Space Program Plans]	Files
408	Letter 10 Dec. 1958 from T. Keith Glennan to Jack E. Froelich re a press conference regarding research activities of JPL.	"
409	NASA, Memo to File from H.E. Newell, 18 Dec. 1958, subject: Conference Report	"
410	Letter from T.K. Glennan to Dr. DuBridge dated 12 Nov. 1959, summarizing impressions of conversations Glennan had with DuBridge and George Green on his trip to Pasadena.	"
411	Frank J. Malina, 10 Dec. 1969, "The U.S. Air Corps Jet Propulsion Research Project No. 1, 1939-1946, A Memoir."	"
412	<u>The Jet Propulsion Laboratory and the Caltech Campus</u> , Report of the JPL Study Committee to Pres. H. Brown, Caltech, 11 March 1970	"
413	Letter, 29 May 1959, from G.F. Schilling, Chief, Astronomy and Astrophysics Program, Office of Space Sciences, to Dr. A.H. Hibbs, congratulating him on Report No. 30-1, "Exploration of the Moon, the Planets, and Interplanetary Space,"	"
414	Letter 20 Oct. 1959, from Hugh L. Dryden, Deputy Admins. NASA to the Honorable Herbert F. York, Director of Defense Research and Engineering, DOD naming Richard W. Davies of JPL as member of the NASA-DOD Space Science Committee.	"
415	THIS WEEK of Nov. 10-14, 1969 establishing Astrionics Div. (360).	"
416	THIS WEEK of FEB. 2-6, 1970, appointing Dr. Donald G. Rea as ALD for Science	"
417	NASA News Release, March 31, 1970 [No. 70-49] "Explorer 1 Returns"	"
418	THIS WEEK of May 4-8, 1970, After June 1, 1970 Caltech Employees need not wear badges on outer garments.	"
419	Preliminary Inventory of THE PAPERS OF ROBERT ANDREWS MILLIKAN	"
420	NASA Report on Official Army Statements on NASA made by Major Gen. John B. Medaris, Dir. of ABMA, & Lt. Gen. Arthur Trudeau. (Statements made before convention of Association of the U.S. Army. Oct. 22, 1958.	"
421	H.K. Forster, Report No. 4-32, <u>Some Stability Considerations for a Rocket Launched at Great Altitudes</u> , Mar. 11, 1947, ORDCIT Project, Contract No. W-04-200-ORD-455, Ordnance Dept.	"
422	<del>W.H. Pickering. Progress Report No. 4-15, Control and Telemetering for "Corporal E", May 15, 1945, Contract No. W-04-200-ORD-455, ORDCIT PROJECT</del>	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
422	Historical Monograph No. 4, "Development of the Corporal: The Embryo of the Army Missile Program," by James W. Bragg, April 1961, Prepared by ABMA, Vol. I of II.	Shelf
423	Tech Memo No. 312-95, dated April 13, 1961, <del>Aug</del> Author, V.C. Clarke, and M.S. <del>xx</del> Johnson, Subject: Tracking Lunar and Interplanetary Trajectories During the Decade 1960-1970	Files
424	IOM from E.M. Pierce to Senior Staff, Aug. 9, 1961, Subject: Facilities Master Planning Board Membership and Duties	"
425	IOM dated Nov. 5, 1964, from R.J. Gardner to Senior Staff, et. al. Subject; The JPL Analog Computer Facility.	"
426	Report of the Committee on Science and Astronautics, U.S. House of Reps 89th Congress, Second Session, 1st Interim Report on <u>Master Planning of NASA Installations</u> , Washington, 1966.	"
427	In commemoration of the tenth anniversary of the launch of Explorer I, Feb. 1, 1968, <u>The First Decade of Space Research.</u>	"
428	Memo from Frank Cotter to Hon. T. Keith Glennan, Director, NASA, re: Transfer of JPL & ABMA to NASA. October 23, 1958.	"
429	Senior Staff meeting notes and special staff Study Group meetings from October 1959 to February 1962.	"
430	Bibliography, JPL-4, ORDCIT Project, Compiled by P.T. Carroll, Jan. 1971	"
431	Director's Project Reviews, from Dec. 1969 to April 1970	"
432	Second Juno IV Program Planning Conference, ABMA-JPL, Minutes of Meeting" 24, 25, Sept. 1958.	"
433	JPL Section Report 60-13, Quarterly Report of Invention Development at JPL July 1 to Sept. 30, 1958, dated Oct. 1, 1958.	"
434	Memo from Frank Cotter to Hon. T. Keith Glennan, Director, NASA, re: telephone conversation with George Feldman, Counsel of House Outer Space Committee and conversation with Mr. McCormack. October 24, 1958.	"
435	Bibliography of Satellites and space probes, to June 17, 1958	"
436	IOM <del>afata</del> dated June 3, 1960 from W.H. Pickering to Senior Staff, et.al." Subject: Policy and Procedure on Source Evaluation Boards	"
437	IOM dated 11/13/70 from Deputy Director to the Senior Staff re dress code.	"

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439	IOM Feb. 27, 1962 from B. Sparks to Senior Staff, Subject: Visit of U.S. Senators.	"
440	IOM Mar. 8, 1962 from B. Sparks to Senior Staff, Subject: Task Group for Dr. Shea.	"
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442	Document from Dr. Pickering dated Feb. 11, 1963 entitled: "Composition of the Senior Staff."	"
443	Letter from H.J. Stewart to Rear Admiral John B. <sup>dated May 24, 1963</sup> <del>Heffernan</del> <del>xxxxxx</del> regarding Orbiter/Explorer History.	"
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449	Announcement in <u>This Week</u> , Oct. 26-30, 1970, of the office established for the <del>xxxxxx</del> Outer Planets Ground Tour Project.	"
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450	IOM from W.H. Pickering to Distribution <del>xxxxxx</del> Nov. 2, 1970, of the NASA Police Re International System of Units (SI), enclosing NASA Policy Directive 2220.4 dated Sept. 14, 1970.	"
451	Announcement in <u>This Week</u> , Nov. 23-27, 1970 of numbers to call regarding threatening phone calls.	"
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458	Maynor, "Jet Propulsion an Auxiliary Means of Agumenting the Velocity of Projectiles, May 6, 1942, Photographs also.	"
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467	Letter, To: Dr. Lee A. DuBridge, From: B. C. Murray, Feb. 23, 1965	"
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474	C. E. Bartley, <u>Development of a Castable Solid Propellant Having a Polysulfide Rubber Fuel Base</u> , ORDCIT Project, JPLHF Progress Report, No. 4-37, August 1, 1947.	"
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491	Letter, James H. Wilson to Dr. Frank A. Malina, Subject: Pictures and slides requested by Dr. Malina for his Memoir for Brussels conference. Photographs and checklist attached August 9, 1971.	"
492a	IOM, Leo R. Lunine to James H. Wilson, Subject: Sergeant Final Report No. 20-137. August 2, 1971.	"
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495	Interview with L. C. (Monty) Montgomery, JPL and Charles W. Cole, JPL by P. Thomas Carroll, August 25, 1971, Subject: To determine the chain of events leading up to the Sergeant Guided Missile System development.	"
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501	Interview with John Small, JPL, by P. Thomas Carroll, Subject: Loki September 1, 1971.	"
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508	Telephone interview, Dr. Frank M. McMillan, Shell Development Co., Emoryville, Calif. (ret.) by P. Thomas Carroll, JPL, September 23, 1971, Subject: Introduction of Polysulfide as a Solid Propellant Binder.	Files
509	Document, JPL Executive Board Minutes, Meeting of December 28, 1944 Attached documents: Division of Responsibility and Duties between the Board itself, the Acting Chairman of the Board, and the Acting Director of the Laboratory. (CIT)	"
510	<u>Combined Jupiter and Sergeant Missile Firing Schedule</u> , JPL SGT 1 (also JUP 2), n.d.	"
511	<u>Proposal for Sergeant Missile System</u> , Prepared for Redstone Arsenal by Sperry Gyroscope Co., Great Neck, N.Y., January 1956. JPL SPR #26	"
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522	J. I. Shafer, G. Robillard, <u>High Performance Boosters for the Anti-Aircraft Rocket Loki</u> , ORDCIT Project , Contract No. DA-04-495-Ord 18, Publication NO. 18, JPL, March 12, 1953.	"
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526	<u>Minutes, Loki Meeting held at Jet Propulsion Laboratory</u> , February 4, 1952 Review of Project.	"
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531	R. V. Meghreblian, Notes on JPL Reorganization of 1959, nd.	Shelf
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541	Document, Memo on the Future of Jet Propulsion Research at CIT. November 1943.	Files
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543	Document, GALCIT PROJECT No. 1 Conference Minutes (Liquid Solid Propellants) Weekly, 3/11/43 - 12/31/43, with exceptions.	Shelf
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546.	Document, Selected Correspondence, JPL (General) 1944-47, from CIT Contract Files. 1944-1947.	Shelf
547	Newsclip from The Sunday Times, 1969? <u>The Odd Beginning of Ron Hubbard's Carrier.</u>	Files
548	Document, Aerojet Engineering Corp., Model Number Book 1943, JATO Unit Descriptions. 3-12-43 (JPL)	Shelf
549	Document, JPL GALCIT, Memo No. 4-5, <u>The Status and A Future Program for Research &amp; Development of Solid Propellants.</u> March 19, 1945.	Shelf
550	Transcript of W. H. Pickering's remarks at the AIAA Panel on "Rocketry in the 1950's", dated December 3, 1971.	Files
551	Memorandum from Roy W. Johnson, Director, ARPA to Secretary of Defense, subj: Proposed Transfer of ABMA/JPL to NASA, Oct. 28, 1958	Files
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558	<u>GALCIT/Air Corps Jet Propulsion Research Report No. 6. Description of the Experiment Station of the Air Corps Jet Propulsion Research Project, February 26, 1941. JPL Bibl. V 053.</u>	Files
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560	Taped Interview with Dr. Robert V. Megrebian, Deputy ALD for Tech. Divisions, September 27, 1971, by James H. Wilson.	Files
561	Taped Interview with Dr. Fritz Zwicky, May 17, 1971, with R. Gargill Hall, JPL Historian.	Files
562	JPL Document <u>Design, Development, and Field Tests Of The WAC B Sounding Rocket</u> , Report No. 4-41, December 15, 1947.	Files
563	Xerox photo copy, JPL reunion (around 1950-51). List of names attached.	Files
564	JPL Monthly Summaries, 4-1 to 4-35, 1944-47. ORDCIT project (In binders, Vols I and II)	Shelf
565	JPL Document, ORDCIT Project, <u>Ballistic Form Factor and Flight Performance of WAC B</u> , Homer J. Stewart and Henry T. Nagamatsu, April 22, 1949.	Files
566	Index of retired files, JPL Director, 1937-1962.	Files
567	JPL Document, <u>Wind Tunnel Facilities</u> , Tech. Release No. 34-257, by George G. Goranson, Robert E. Covey, April 18, 1961, Revised January 1, 1962.	Shelf
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570	National Aeronautics & Space Admin. Operating Research and Development Contract, No. NASw-6, approved by T. Keith Glennan, Administrator. Contractor, California Institute of Technology, May 1, 1959.	Files
571	Contract GALCIT One (JPL-1) W 535 ac 20260, Jun- 25, 1941, including War Department Change Order and Supplemental Agreements.	Files
572	Invention Report No. 4-5 (JPL) [ <u>Polysulfide</u> ] Propellant, June 8, 1945. With accompanying documents, transferral letters, and patent applications. (Charles E. Bartley and Lloyd Spencer)	Files
573	Lecture and papers, Dr. Homer J. Stewart, Caltech. General summary and status of JPL guided missile development program. 1946.	Files
574	Telecon between P. Thomas Carroll, JPL Historian's Office, and Richard W. Porter, Manager, Scientific & Technological Affairs, General Electric Co., New York, subj: RV-A-10 Development, August 7, 1972.	Files
575	JPL Memo to Security from Jack Shafer, Irl Newlan, regarding withholding of shipment of data to Thiokol, July 26, 1951.	Files
576	JPL Memo, Literature Search No. 113, Copy 3 to Gordon Haddock from Judy Hayes, subj: Supplement to LS #113, JPL Reports on Solid Propellants, April 11, 1960.	Shelf
577	Interview with James D. Burke, JPL, by P. Thomas Carroll and James H. Wilson, August 15, 1972. Subject: Origins of Loki.	Files
578	Memorandum from Deputy Secretary of Defense for DR. Glennan, concerning conversation with Secretary Brucker and specific points in Army proposal which were emphasized as unsatisfactory to NASA. November 3, 1958.	Files
579	Progress Report No. 4-127, Scale-Model Flight Tests of a Proposed <u>RTV-G-Rocket</u> , JPL Document, by James D. Burke, Jack E. Froehlich, Barnett R. Adelman, November 24, 1950.	Files
580	List of Correspondence transferred from Von Karman's Office, May 17, 1950.	Files
581	JPL Document, <u>Optimum Demodulation</u> , EP-164, copy 3, April 8, 1953.	Files
582	Corres. regarding viewpoint of NASA regarding continued activity by the Jet Propulsion Lab., from Hugh L. Dryden, NASA Deputy Administrator, to Maj. Gen. August Schomburg, Deputy Chief of Ordnance, Dept. of the Army, Washington, D.C., January 22, 1959.	Files
583.	Letter from Hugh L. Dryden, Deputy Administrator, NASA, to Maj. Gen. J. B. Medaris, Commanding Gen. U.S. Army Ordnance Missile Command, regarding supporting research program at JPL, January 14, 1959.	Files

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586 a	Letter from C. S. Draper, Massachusetts Institute of Technology, Cambridge, Mass. to Dr. Wm. H. Pickering, Director, JPL, concerning agreement on extension of the JPL contract with Caltech and NASA, January 7, 1969.	Files
b	Attachment, Jet Propulsion Laboratory Remarks, by C. S. Draper, May 31, 1968.	Files
587	JPL Document, <u>Microlock: A Minimum-Weight Radio Instrumentation System for a Satellite</u> , Publication 63, ORDCIT Project, Contract DA-04-495-Ord 18, Dept. of the Army, Ordnance Corps, E. Rechtin, J.J. Burke, W.H. Pickering, April 13, 1956.	Files
588	Memorandum for Record by Ira H. Abbott and Wesley L. Hjordnevik, subj: Initial Meeting with Army reps to discuss NASA proposal for transfer of JPL and AFMA, November 17, 1958.	Files
589	JPL Progress Report No. 20-243, <u>Design and Performance of Phase-Lock Loops Capable of Near-Optimum Performance Over A Wide Range of Input Signal and Noise Levels</u> , ORDCIT Project, Contract DA-04-495-Ord 18, Dept. of the Army, R. Jaffe, E. Rechtin, December 1, 1954.	Files
590	JPL Document, External Publication No. 673, <u>Acquisition and Tracking Behavior of Phase-Locked Loops</u> , NASA Contract NASw-6, A. J. Viterbi, July 14, 1959.	Files
591	JPL Document, <u>The Design of Optimum Linear Systems</u> , EP 204 Eberhardt Rechtin, April 1953	Shelf
592	JPL Document, GALCIT, Publication No. 3, <u>Abstracts of Papers Presented at the Guided Missiles and Upper Atmosphere Symposium Held March 13-16, 1946</u> , Publication No. 3,	Shelf

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<u>No.</u>	<u>Item</u>	<u>Location</u>
593	JPL Document, <u>A Feasibility Study of the High-Velocity Stages of a Minimum Orbiting Missile</u> , Publication No. 47, ORDCIT Project Contract DA-04-495-Ord 18, Dept. of the Army, Ordnance Corps, J.E.Froehlick, July 15, 1955.	Shelf
594	JPL Document, <u>Development of the High-Speed Stages for the Re-Entry Test Vehicle</u> , ORDCIT Project Contract DA-04-495-Ord 18, Dept. of the Army, Publication No. 68, A. R. Hibbs, April 13, 1956.	Shelf
595	Taped interview with Dr. A.R.Hibbs by R. C. Hall concerning Evolution of Space Science Program at JPL and NASA during early years, 1959-1962. October 2, 1972.	Files
596	JPL Document, <u>Preliminary Design Considerations for the Bumper Program</u> , Progress Report No. 4-96, Herman Bank, Frank G. Denison, Jr. April 13, 1949.	File
597	Memorandum from Earl D. Hilburn, Deputy Associate Admin. to Mr. Romatowski/AA, regarding NASA-CIT/JPL relationships. July 19, 1963.	Files
598	Memorandum from Earl D. Hilburn to Robert C. Seamans, Jr. subject: Thoughts regarding the current NASA/CIT/JPL Relationship, August 1, 1963.	Files
599	<del>Memorandum for Record from</del> Ira H. Abbott and Wesley L. Hjernevik, subj: Second meeting with Army reps to discuss NASA proposal for transfer of JPL and ABMA. Nov. 12, 1958.	Files
600	Memorandum from Earl D. Hilburn to Dr. Robert C. Seamans, Jr., subject: Correction and clarification of point made in memorandum from Hilburn to Seamans dated August 1, 1963, regarding NASA/CIT/JPL relationship, August 5, 1963	Files
601	Letter from Earl D. Hilburn to R. D. Gilmore, V.P. for Business Affairs, Caltech, regarding NASA/CIT/JPL relationship, August 8, 1963.	Files
602	Letter from Earl D. Hilburn to Dr. W. H. Pickering, concerning laboratory's needs in terms of program and project priorities. August 9, 1963.	Files
603	Letter to Dr. W. H. Pickering from Earl D. Hilburn, concerning NASA Headquarters plan to realign administration of the JPL contract. August 14, 1963.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
604	Skeleton Draft, NASA Position Paper with Respect to NASA/CIT/JPL Relationships, August 16, 1963.	Files
605	a: Memorandum for Mr. Hilburn from James E. Webb, Administrator, concerning NASA-JPL/CIT relationships, August 19, 1963. b: Skeleton Draft attachment	Files
606	Memorandum from Earl D. Hilburn to E. M. Cortright, subject: Thoughts regarding August 2, 1960, document defining NASA/JPL relationships, August 26, 1963.	Files
607	Letter from Earl D. Hilburn to E. M. Cortright, subject: Present Efforts to Develop Position Paper re NASA/CIT/JPL Relationship. August 27, 1963.	Files
608	Memorandum from Earl D. Hilburn to Dr. Robert C. Seamans, Jr. subject: Preparation for Monday, September 16 Meeting with DuBridge - arguments may be heard as to why fee should be Increased in FY 1964. September 11, 1963.	Files
609	Memorandum from Earl J. Sample to Earl D. Hilburn, subject: CIT Renewal Contract, September 13, 1963.	Files
610	Memorandum for the File, from Earl D. Hilburn, subject: Personal Notes Regarding Meetings with CIT Personnel During the Afternoon of Monday, September 16, 1963. September 17, 1963.	Files
611	Letter from Earl D. Hilburn to Mr. Robert Gilmore, VP for Business Affairs, CIT, concerning list of topics presenting areas of current concern, October 17, 1963.	Files
612	Memorandum from Earl D. Hilburn to Dr. Robert C. Seamans, Jr. subject: Progress Report on "Rehabilitation" of JPL, November 6, 1963.	Files
613	Memorandum from James E. Webb, Administrator, to Mr. Hilburn, concerning personnel help for JPL.	Files
614	Memorandum from Earl D. Hilburn to Dr. Newell, subject: JPL Accounting System, November 18, 1963.	Files
615	Memorandum from Earl D. Hilburn to Dr. Newell, subject: Negotiations Relative to new JPL/CIT Contract, November 18, 1963.	Files
616	Memorandum from Earl D. Hilburn to Dr. Seamans, concerning preparation of brief status report, November 25, 1963.	Files
617	Letter from Earl D. Hilburn to Mr. Robert Gilmore, VP for Business Affairs, CIT, concerning lack of progress in finding a General Manager for JPL. December 31, 1963.	Files



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<u>No.</u>	<u>Item</u>	<u>Location</u>
618	Memorandum from Earl D. Hilburn to Mr. Lingle, AAD, subject: Your Request of January 7 for Items Regarding Improved Management, January 10, 1964.	Files
619	Letter from Earl D. Hilburn to Dr. Arnold O. Beckman, President, Beckman Instruments, concerning retainment of basic values of university or campus type research. April 28, 1964.	Files
620	Personal & Confidential Memo from Earl D. Hilburn to Mr. Webb, subject: Webb Memo to Seamans Dated April 16 Relative to Visit of Beckman and Pickering on Wednesday, April 29, dated April 28, 1964.	Files
621	Letter, Personal & Confidential from Earl D. Hilburn to Dr. Arnold O. Beckman, concerning personnel ceiling problem at JPL. May 1, 1964.	Files
622	Letter from Earl D. Hilburn to R. B. Gilmore, VP for Business Affairs, CIT, concerning progress report regarding CIT-JPL Improvement program, June 15, 1964.	Files
623	Letter from Arnold O. Beckman to Mr. James Webb, regarding congratulations on successful Ranger 7 flight and withholding signing a new contract. July 31, 1964.	Files
624	Letter from T. Keith Glennan, President, Case Institute of Technology to James E. Webb, regarding success of Ranger VII. August 26, 1964.	Files
625	Conference Report from Homer E. Newell, subject: Meeting with Dr. L. DuBridge, President of Caltech, Regarding JPL/Caltech/NASA Relationships, 14 September 1964.	Files
626	Memorandum from Raymond Einhorn to Earl D. Hilburn, subject: Review of Purposes and Application of CIT Fee and Overhead for the JPL Contract, October 20, 1964.	Files
627	Memorandum (Personal & Confidential) from Earl D. Hilburn to Webb, Dryden, Seamans and Newell, subject: Background Information relating to visit on Monday, March 23, of DR. Arnold Beckman, Chairman of the Board of Trustees of California Institute of Technology, March 20, 1964.	Files
628	Letter (Personal & Confidential) from Earl D. Hilburn, to Dr. Arnold O. Beckman, regarding further discussions concerning further discussions on the JPL management problem. March 27, 1964.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
629	Memorandum from F. W. Godsey, Jr., JPL Consultant, concerning JPL and Caltech performances, and possible conversion of JPL to a NASA Center. October 26, 1966.	Files
630	Brochure prepared for NASA Advisory Committee on Organization, Jet Propulsion Laboratory, Its Objectives, Organization, and Programs, May 6, 1960, 29 pp.	Files
631	Interview with E. M. (Gene) Pierce, Sr. June 19, 1972 by James H. Wilson, JPL Historian's Office on History of JPL.	Files
632	Letter from F.O. Carroll, Major, Air Corps, Chief, Experimental Engineering Section, Wright Field, Dayton, Ohio, to Dr. Th. von Karman, Daniel Guggenheim Aeronautical Lab, CIT., concerning application of jet propulsion to a specific airplane for assisting takeoff, September 16, 1940.	Files
633	Document, <u>Flight Operations Management for Unmanned Planetary Exploration Systems</u> , University of Southern California, Directed Research, ASM 590, Aaron Rose, Ph.D. Master's Thesis, Joseph A. Beacon, January, 1969.	Files
634- 646	Thirteen taped interviews with Homer J. Stewart, Professor, Caltech by J. H. Wilson, Caltech/JPL Early History.	Files
647	Taped interview, Dorothy Lewis, former Secretary, GALCIT One and JPL, 1942-46.	Files
648	Notebook, property of Charles R. Foster, JPL, WAC B, 1946	Files
649	JPL Document, ORDCIT Project, Contract No. DA-04-495-Ord 18, Department of the Army Ordnance Corps, Section Report, 9-56, <u>Operations History of the JPL Electronic Differential Analyzer for 1952</u> , Copy No. 7, pp. 1-17, A. Presson, J. Wedel, January 10, 1953.	Shelf
650	JPL Document, Section Report No. 9-30, <u>Operations History of the JPL Electronic Differential Analyzer to December 31, 1951</u> , Copy No. 1, pp. 1-10, D. Thomas and J. Wedel, February 29, 1952.	Shelf
651	JPL Document, Section Report No. 9-94, <u>Operations History of the JPL Electronic Differential Analyzer for 1953</u> , Copy No. 4, Section Report No. 9-94, Fred H. Lesh and John J. Wedel, Jr., March 1, 1954.	Shelf
652	Report, "Financial Impact of JPL on the Community," for use in debate with the City of Pasadena, from R.B. Phillips to Distribution, dated April 23, 1973.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
653	<u>A History of Computing at White Sands Missile Range, New Mexico, January 1, 1973.</u>	Files
654 a	<u>Explorer I (JPL EP 461), February 28, 1958</u>	Files
654 b	<u>JE Froehlich, Contributions of the Explorer to Space Technology, (JPL EP 5 &amp; 6,) July 7, 1958</u>	Files
655	<u>W.H.Pickering, Management Techniques for the Management and Development of Weapon Systems, January 22, 1958</u>	Files
656	Memorandum for Record from Ira H. Abbott, subject: Third meeting with Army reps. to discuss NASA proposal for transfer of JPL and ABMA, November 15, 1958.	Files
657	JPL-3 Proposals JPL-1 February 28, 1944 JPL-2 April 5, 1944 JPL-3 August 1, 1945 JPL-3A September 21, 1945	Files
658	<u>JPL-4 Correspondence February 28, 1944-1948</u>	Files
59	<u>Correspondence on JPL-9 Contract, with Copy of Contract and Supplements, from CIT's JPL files, 1946-50</u>	Files
660	<u>Abstract of Notes and Correspondence JPL-11 SWT Construction October-December 1946 from CIT Contract Files</u>	Files
661	<u>JPL-8 HARTV Study Correspondence and Contract NOa (s) 7913 12/12/45-7/31/45 form JPL Contract Files</u>	Files
662	<u>JPL-6 Contract Construction 1944-45 W-04-353-Eng-1056 Corps of Engineering (Des. by JPL)</u>	Files
663	NASA Memo for Rosen, Mitchell and Lilly, from Abraham Hyatt, concerning (1) program management information by King's staff; (2) discontinuation of solid propellant work at JPL, but continuation of liquid propellants, August 9, 1960.	Files
664	NASA letter from Abe Silverstein to Dr. Wm. H. Pickering, concerning list of NASA personnel designated as project officers, July 2, 1959.	Files
665	Memorandum from Abraham Hyatt, NASA to Silverstein, subject: JPL Proposal for the Development of a 6000 pound thrust (vacuum) Storable Liquid Propulsion System, January 2, 1959.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
666	JPL Document, <u>Interim Report From Data Handling Committee</u> , Reorder No. 61-729, June 22, 1961.	Shelf
667	JPL Document, Technical Memorandum No. 33-52 (Addendum B), <u>Some Interrelationships and Long-Range Implications of the C-3 Lunar Rendezvous and Solid Nova Vehicle Concepts</u> , October 2, 1961	Shelf
668	JPL Document, <u>A Solid-Propellant Nova Injections Vehicle System</u> , TM No. 33-52 (Addendum A), August 3, 1961.	Shelf
669	JPL Document, <u>Exploring New Scientific Frontiers</u> , 1954-55.	Shelf
670	Air Corps JPL Research Document, <u>GALCIT Project No. 1</u> , Proposed Research Program for the first six months of 1944 for the Armament Laboratory, AAF Materiel Center, December 1, 1943, Amended December 11, 1943, Theodore von Karman, Louis G. Dunn.  Including various other proposals for research at JPL, through 1953.	Shelf  "
671	Document, McKinsey & Company, Inc., Management Consultants, <u>NASA-JPL Relationships and Role of the Western Coordination Office, NASA, March 1959.</u>	Files
672	Folder, JPL Ten Year Plan Material, November 1959.	Files
673	Folder, Senior Staff Meetings thru December 1963.	Files
674	Folder, Manned Lunar Program, including memos, trip reports, 1961-1963.	Files
675	Folder, Senior Staff Meetings, 1963 to 1966.	Files
676	Document, <u>GALCIT Project No. 1, Conference Notes, ORDCIT, 1944-1946.</u> Encl. No. 1, to L.S.Sauer's letter to Commanding General, USAMC, Washington, D.C., dated 12-8-69	Shelf
677	Document, JPL-4 Monthly Summary, including Tables, Memos, Bi-Monthly Letters, 1945-1949, also Encl. No. 2 to L.S.Sauer's letter to Commanding General, USAMC, Washington, D.C., 12-8-69	Shelf
678	JPL Document, <u>Solid Propellants, Section 4</u> , Ordicit and Galcit Propellants, 1944-1945.	Shelf
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<u>No.</u>	<u>Item</u>	<u>Location</u>
680	JPL Document, <u>Reports on Perchlorate-Asphalt Fuel (U), August, 1958, Reports dated 1942-1945.</u>	Files
681	Bibliography Information, JPL Codorac Reports, 1956-1958, Copy No. 12.	Files
682	JPL Writeup on Large Solid NOVA, June 1961, including diagrams.	Files
683	Bibliography, <u>JPL Reports on GALCIT Propellants, 1942-1945, including Aerojet Reports.</u>	Files
684	JPL Document, <u>Notes On Tour of Inspection to the United Kingdom and France, October 13 - December 5, 1944, by F. J. Malina, Caltech.</u>	Files
685	a. Letter from Army Service Forces, Walter S. Rountree, to California Institute of Technology, attention: Lloyd Spencer, subject: Contract W-04-200-Ord-455, Inventions and Discoveries, regarding copy of joint patent application of Charles E. Bartley and Lawrence R. Settlementre. Dec.21, 1945.	Files
	b. Letter from Army Service Forces, Walter S. Rountree to Caltech, subject: Contract W-04-200-Ord-455, Inventions and Discoveries - Patent Applications, 3 January 1946.	Files
	c. Letter from War Department, Walter S. Rountree, Subject: Licenses to Government, dated 30 January 1946.	Files
	d. Letter from Lloyd Spencer, Caltech, to Walter S. Rountree, subject: Licenses to Government, 5 February 1946.	Files
686	JPL Document, <u>Progress Report No. 4-69, Spin Rocket Development Tests for the Bumper WAC, John I. Shafer, June 8, 1949.</u>	Files
687	Notes, equations and diagrams on rocketry solid propellants star grain designs, J. I. Shafer, no date.	Files
688	a. JPL Memo to Senior Staff from W. H. Pickering, subject: Study on Accelerating the National Space Program, April 25, 1961.	Files
	b. JPL Discreet Document, <u>Preliminary Study of National Space Effort</u> , J.D. Jaffe, R.R. McDonald, W.J. Schimandle, May 9, 1961.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
689	Memo, "Army Plan for Implementing NASA Proposal for Transfer of JPL from Army to NASA, 14 November 1958.	Files
690	Memorandum for Record from Ira H. Abbott and Wesley L. Hjernevik, subj: Discussion with Army representatives on November 15 of "Army Plan for Implementing NASA Proposal for Transfer of JPL from Army to NASA," dated 14 November 1958," memo dated November 17, 1958.	Files
691	JPL Memo to Distribution from J.E. Froehlich, subject: "Minutes of Meeting on NASA Space Program of October 27, 1958," dated 28 October, 1958.	Files
692	JPL Memo to Distribution from J.E. Froehlich, subject: "Minutes of Meeting No. 3 on NASA Space Program held 29 October, 1958," dated 30 October 1958.	Files
693	JPL Memo to Attendees from J.E. Froehlich, subject: "Minutes of Meeting on NASA Space Program between JPL and AFMA held at JPL 31 October, 1958," dated 3 November, 1958; concerning successful team effort.	Files
694	JPL Memo to Distribution from J.D. McKenney, subject "Minutes of NASA Design Study Committee Meeting," dated November 4, 1958.	Files
695	JPL Memo to Distribution from J. D. McKenney, subject: "Minutes of Meeting of NASA Program Study Committee with Senior Staff," dated November 10, 1958.	Files
696	JPL Memo to Distribution from J.D. McKenney, subject "Minutes of NASA Design Study Committee Meeting," dated November 10, 1958.	Files
697	JPL Memo to Distribution from J. E. Froehlich, subject: "Minutes of Meeting No. 4 on NASA Space Study Program held 3 November, 1958," dated 5 November, 1958.	Files
698	JPL Memo to Distribution from J. E. Froehlich, subject: "Minutes of Meeting No. 2 on NASA Space Program held October 28, 1958," dated 29 October, 1958.	Files
699	Letter from C. I. Cummings to Oran W. Nicks, NASA, subject: "JPL's AMR Facility Requirements," dated 30 September, 1960.	Files
700	JPL memo to Senior Staff from W. H. Pickering, JPL, subject: "Study on Accelerating the National Space Program," dated 2 May, 1961.	Files
701	JPL Memo from W. S. Shipley to W. H. Pickering, subject: "NASA-JPL Relationship," dated August 1, 1961.	Files
702	Memo from DR. Wernher von Braun, George C. Marshall SFC, to The Seventh NASA Management Conference, stating Marshall's views concerning the current NASA organization, dated October 5, 1962.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
703	Paper, "Remarks of Harry J. Goett, Director, Goddard Space Flight Center at the 7th Management Conference - Langley, October 4-5, 1962."	Files
704	Letter from W. H. Pickering, Director, JPL, to Keith Glennan, Director, NASA, regarding working relationship between JPL and ABMA. November 20, 1958.	Files
705	JPL Memo to Senior Staff and Technical Section Chiefs, from W. H. Pickering, subject: "Realignment of NASA Management Structure," October 31, 1962.	Files
706	JPL Memo to Senior Staff from W. H. Pickering, subject: "Executive Council," dated February 14, 1963.	Files
707	Newsclip, "Missile Range Chief H. R. Turner Dies," 1973.	
708	Taped interview: R. C. Hall and Dr. Lee A. DuBridge, Caltech President, February 11, 1974.	Files
709	Letter from Mrs. Jeanne Forman to R. Cargill Hall, regarding papers of the late Ed Forman, January 28, 1974.	Files
710	Taped interview with Dr. Frank J. Malina, founder of JPL, by James H. Wilson, June 8, 1973.	Files
711	Interoffice Memo from W. H. Pickering to Senior Staff subject: Guidelines for Operational Planning Decisions Through FY'75, dated March 20, 1974.	Files
712	Booklet, "The Itinerary of Magic," by Frank J. Malina, 1972.	Files
713	<u>Impact of Science on Society</u> , Vol. XXIV, No. 1, 1974, "Reflections of an Artist-Engineer on the Art-Science Interface," by Frank J. Malina, pp. 19-29.	Files
714	Paper, <u>Spaceflight</u> , "America's First Long-Range Missile and Space Exploration Programme: The Ordait Project of the Jet Propulsion Laboratory, 1943-1946," by Dr. Frank J. Malina, pp. 442-456, December 1973.	Files
715	"Summary of Our Position on the Remaining Unresolved Issues Re The Transfer of JPL from the ARMY," November 24, 1958.	Files
716	Draft Memo for Dr. T. Keith Glennan, subject: "Concerning attached correspondence from Dr. W. H. Pickering," concerning JPL/ABMA, and assurance with NASA that JPL can work effectively together. November 25, 1958.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
717	AOMC Executive Briefing, "Duplication, Waste and Progress," reprinted from "Missile Design and Development," copyright 1959 by Aviation Research and Developing Publishing Corps, n.d.	Files
718	Paper, "Considerations Preparatory to Establishing a NASA Position on ABMA," August 20, 1959.	Files
719	a: Paper, "Objectives of the Army Ordnance Missile Command," by Major Gen. J. B. Medaris, Commanding General b: U.S. Army Ordnance Missile Command. c: Army Ballistic Missile Agency. d: Army Rocket and Guided Missile Agency. e: Redstone Arsenal. f: White Sands Missile Range. g: Jet Propulsion Laboratory.	Files
720	<u>Saturday Evening Post</u> , "Inside Test Cell F," Ronald M. Deutsch, pp. 36-ff, March 5, 1955. (JPL rocket testing)	Files
721	Handwritten note from Jack Parsons, JPL, from Hotel Governor Clinton in New York City, to Frank Malina, regarding witnessing one of Maynor's tests, with diagrams, dated May 5, 1942.	Files
722	"Notes On Hydrogen-Oxygen Developments," by W. B. Powell (JPL), August 3, 1974.	Files
723	Bibliography, Suggested Reading, JPL History.	Files
724	<u>Engineering &amp; Science</u> , "The DuBridge Years," pp. 10-21, December 1968 issue.	
725	Letter from Earl D. Hilburn, Deputy Associate Administrator for Industry Affairs, to Dr. Arnold O. Beckman, concerning processes of graduate education and basic research and covering Dr. Seamans visit to JPL on January 28-29, 1963. March 27, 1964.	Files
726	Letter from Earl D. Hilburn to Arnold O. Beckman, concerning discussion with James E. Webb on setting the record straight with programs between Caltech and JPL. April 28, 1964. (Management problems)	Files
727	Memorandum from Earl D. Hilburn to James E. Webb, subject: Webb memo to Seamans dated April 16, 1964 relative to visit of Beckman and Pickering on Wednesday, April 29; memo dated April 28, 1964.	Files
728	Memorandum from Earl D. Hilburn to Webb, Dryden, Seamans and Newell, subject: Background information relating to visit on Monday, March 23, of Dr. Arnold Beckman. March 20, 1964.	Files



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<u>No.</u>	<u>Item</u>	<u>Location</u>
729	Carbon page from Dryden Notebook, "Possible Statement of Mission for Jet Propulsion Laboratory," Establish Karman Space Flight Center operated by Cal Tech under contract from NASA. October 10, 1958.	Files
730	Document, <u>JPL Five-Year Plan</u> , 500-21, Issue 5, August 5, 1974.	Shelf
731	News Clips; JPL Land Development, 1957.	Files
732	Interview tape by John L. Sloop, NASA and Walter Powell, JPL, with contributions of R. C. Hall, JPL Historian, subject: Early Work On Hydrogen Oxygen and Engine Cooling at JPL, May 3, 1974.	Files
733	Hydrobomb (JPL-2) Contract, W-33-038 ac 4441, 1944-1946.	Files
734	Hydrobomb (JPL-2) Correspondence, 1943-1944.	Files
735	Theoretical Analysis of Ramjet Propulsion, JPL-3, Contract W-33-038ac4320, 1944-1951.	Files
736	Correspondence (JPL-3) Theoretical Analysis of Ramjet Propulsion, Contract W-33-038ac4320, supplements and expenditures, 1946-1952.	Files
737	Correspondence (JPL-3) Theoretical Analysis of Ramjet Propulsion, Contract W-33-038ac4320, 1944-1945.	Files
738	Correspondence (JPL-3) Northrup Aircraft Inc., miscellaneous and technical, 1949.	Files
739	Taped interview with John Mac L. Hunt, former Staff Counsel of the California Institute of Technology, subject: Caltech/Army/NASA Relations and JPL History, by R. Cargill Hall and Clayton R. Koppes on November 18, 1974.	Files
740	Memo from T. Keith Glennan, NASA Administrator, to Dryden and others (NASA Internal Use Only), subject JPL-NASA Relationships, dated October 19, 1959.	Files
741	"Tighter Control Over JPL Urged In Report of House Space Committee," by Heather M. David. Concerning NASA's request that JPL begin operating in accordance with the new contract. <u>Missiles and Rockets</u> , June 22, 1964, p.15.	Files

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742	Industry will build . . . "NASA Plans New Spacecraft, Prospects for FY'66 Funding Termed Good for Unmanned Mars Exploration Vehicles; Projects Are Part of Expanded Planetary Study," by Hal Taylor. Two 1969 flights to be made with heavy Mariner-type spacecraft. <u>Missiles and Rockets</u> , June 1, 1964, p.15.	Files
743	JPL Memo from D. E. Shaw to J.N. James, subject: Distinguished JPL Alumni, regarding inputs of alumni names, November 25, 1974.	Files
744	<u>JPL Annual Report, 1973-1974.</u>	Shelf
745	Letter from James C. Fletcher, NASA Administrator, to Kenneth J. Gray, Chairman, Subcommittee on Public Buildings and Grounds, Washington, D.C., concerning naming certain buildings at JPL in the name of former Congressman H. Allen Smith, January 31, 1973.	Files
746	Memorandum from Gerald J. Mossinghoff, Deputy Assistant Administrator for Legislative Affairs, for the Record, regarding H.Allen Smith/JPL naming of buildings at JPL.	Shelf
747	<p>a. Memo from W. H. Pickering to Senior Staff concerning NASA Headquarters Reorganization, effective March 15, 1974, dated March 6, 1974.</p> <p>b. Text of TWX received from NASA Headquarters addressed to Center Directors, from DR. GEorge M. Low: Summary of Reorganization. March 5, 1974.</p> <p>c. Text of TWX received from NASA Headquarters addressed to Center Directors, from Dr. James C. Fletcher: NASA Reorganization and Key Personnel Appointments March 5, 1974.</p>	Files
748	Release from Office of Public Education and Information (JPL), Major General Alvin R. Luedecke has been named as deputy director as of August 1, 1964, dated June 29, 1964.	Files
749	JPL Memo to All Personnel from W. H. Pickering, subject: Appointment of Deputy Director. August 11, 1964.	Files
750	Interview tape by R. Cargill Hall, with Robert Nathan, concerning Project Ranger and the Development of Photo Enhancement Techniques at JPL, January 22, 1975.	Files

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751	"Jet Propulsion Laboratory," Enciclopedia de Aviacion y Astronautica, Vol. 5, 1973, Ediciones Garriga, S.A.	Files
752	Letter from James E. Webb, concerning Ranger History Caltech/JPL/NASA relations, to R. Cargill Hall, January 20, 1975.	Files
753	Principles Governing The Management and Operation of the Jet Propulsion Laboratory, concerning responsibilities of Senior Staff and subordinate elements of management, by W. H. Pickering, February 15, 1963.	Files
754	A Brief Summary of the American Ordnance Association Seminars On Capabilities and Techniques of American Armament for Limited War, held December 4, 1957 in New York City, prepared by C.I. Cummings, December 9, 1957.	Files
755	<u>Director's Diary</u> , NASA-AFMA-JPL Situation, No. 4, November 13, 1958.	Files
756	<u>Spaceflight</u> , n.d., "America's First Long-Range Missile and Space Exploration Programme: The Ordait Project of the Jet Propulsion Laboratory, 1943-1946, pp. 442-456.	Files
757	<u>The First Decade of Space Research</u> , In Commemoration of the Tenth Anniversary of the Launch of Explorer 1, with letter from Dwight D. Eisenhower dated January 31, 1968. Document dated February 1, 1968.	Files
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766	Letter from Caltech by Lee A. DuBridge, concerning problems of relationship between JPL and Caltech, dated April 30, 1962, to Mr. Lindley C. Morton, Huntington-Sheraton Hotel, Pasa.	Files
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768	Memo pages, Order of Business; Acquisition of Land by JPL; The Mission of JPL; JPL Fact Sheet; Meeting at Jet Propulsion Laboratory, February 12, 1957.	Files
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778	Statement of William H. Pickering, Director, JPL - JPL Capabilities in Technology Transfer/Civil Systems, prepared for Senate Commerce Committee, Subcommittee on Science, Technology and Commerce, September 4, 1973.	Files
779	(From Pickering Files, Roll 10-6) Letter from T. Keith Glennan, NASA Administrator, to Dr. William H. Pickering, Director, JPL, regarding clarification of the Centaur-Vega relationship. April 7, 1959.	Files
780	JPL Memo from the Director, W. H. Pickering to All Personnel, regarding Mariner 10 mission commemorative stamp, and the first day of issue ceremonies, April 2, 1975.	Files
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782	Caltech News Bureau Memo, regarding appointment of Dr. Bruce C. Murray, new Director of Caltech/JPL to succeed Dr. William H. Pickering, to become effective some time after first of the year. June 20, 1975.	Files

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349	Aerojet Engineering Corp., Report No. 346, 23 Dec. 1948, RESEARCH ON ROCKETS AND OTHER VEHICLES AS CARRIERS OF SCIENTIFIC INSTRUMENTATION	"
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352	BuAer Organization Charts	Files
353	BuAer's Early Earth Satellite Program, notes on discussion with Dr. Charles Harry, Naval Air Systems Command, 29 Jan. 1969 - <i>Lee Pearson</i>	"

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354a	Memo for Executive Director, Guided Missiles Comm., 7 Feb. 1947, from F.H. Richardson, Adm. Sec. of Joint Research and Development Board, Subject: Earth Satellite Vehicle - Agency for Coordination of with the following attachment:	Files
354b	Memo with enclosures dated Jan. 24, 1947 from Rear Adm. L.C. Stevens BuAer to the Joint Research and Dev. Board, SAME subject as above.	"
354c	Enclosure to above entitled DIRECTIVE, FORMATION OF AD HOC PANEL ON ASTRONAUTICS,	"
354d	Enclosure to 354b entitled PRELIMINARY STATEMENT OF PROBLEM FOR PROPOSED AD HOC PANEL ON ASTRONAUTICS	"
355	Agenda to the 7th Meeting of the Joint Research and Development Board [late Feb. 1947] Item 9: <del>for</del> Earth Satellite Vehicle	"
356	Agenda to 8th Meeting of the JRDB, no date [approx. March 1947] Item 12 -- Earth Satellite Vehicle	"
357	Agenda to 9th Meeting, JRDB, n.d. [approx. late June or Early July] Item 5. -- Earth Satellite Vehicle	"
358	Memo for the JRDB dated 13 June 1947 from Hoyt S. Vandenberg, Lt. Gen. USA, Subject: Earth Satellite Vehicle - Agency for Coordination of	"
359	Agenda to 10th Meeting of the JRDB, [July 1947] Item 7: Earth Satellite Vehicle	"
360	Memo for Members and Assoc. Members, Comm. on Guided Missiles, dated Mar. 4, 1947, Subject: Earth Satellite Vehicle from S.D. Cornell, Acting Executive Director.	"
361	Annex "A" to Agenda of 4th Meeting, Memo for Executive Director, Comm. on Guided Missiles, by L.V. Berkner, Executive Secretary of Comm. on Guided Missiles of the JR&DB, Subject: Earth Satellite Vehicles.	"
362	Memo to Secretary, Aeronautical Board, 23 Apr. 1947, from L.V. Berkner Executive Secretary of Comm. on Guided Missiles, JR&DB, Subject: Earth Satellite Vehicle - Agency for Coordination of	"
363	Memo for Executive Director, Comm. on Guided Missiles, 24 April 1947 from F.H. Richardson, Admin. Sec. of Comm. on Guided Missiles, JR&DB, Subject: Earth Satellite Vehicles-	"
364a	Memo to the Comm. on Guided Missiles, 7 Jan. <del>10-1947</del> 1948, from F.H. Richardson dep. to L.R. Hafstad, Exec. Secretary, Subject: Earth Satellite Vehicles	"
364b	Draft of above	

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364a	Agenda of 10th Meeting [late Jan. 1948] Item 10 - (Action) Earth Satellite Vehicle with following attachments:	Files
364b	Memo to the Comm. on Guided Missiles, 7 Jan. 1948, subj: Earth Satellite " Vehicle, by F.H. Richardson, dep. to L.R. Hafstad, Exec. Sec. of R&D Board.	"
	and	
364c	Status Report of Earth Satellite Vehicle, 15 Jan. 1948, Comm. on Guided Missiles, R&D Board.	"
365	Letter dated 6 Feb. 6, 1948 from Frederick L. Hovde, Chairman of Comm. on Guided Missiles, R&D Board, to Dr. W.A. MacNair of Bell Telephone Labs.	"
366	Document dated 29 Mar. 1948 entitled TECHNICAL EVALUATION <del>FOR</del> GROUP, COMMITTEE ON GUIDED MISSILES, RESEARCH AND DEVELOPMENT BOARD, SATELLITE VEHICLE PROGRAM	"
367	<del>***x</del> Agenda of 12th Meeting of Comm. on Guided Missiles, R&D Board, Item 9 Action on TEG Recommendations Regarding Earth Satellite Program. [late April, 1948]	"
368a	Agenda of 13th Meeting [some time in Aug. 1948] Item 12 - Earth Satellite " Vehicle re the three following documents:	"
368b	Memo to the Secretary, Comm. on Guided Missiles, R&D Board, from the War Dept. dated 26 July 1948	"
368c	Memo to the Secretary, etc. dated 8 July 1948 from the Navy Dept., Office of the Chief of Naval Operations	"
368d	Document from F.O. Carroll, Maj. Gen. USAF, Air Materiel Command Hq. dated 27 July 1948, Subject Satellite Vehicle Program to the Chairman, Comm. on Guided Missiles, R&D Board.	"
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375a	Letter dated 10 Jan. 1946 from Harvey Hall, Commander, USNR, to Maj. Gen. H.M. McClelland, U.S. Army	"
375b	Letter dated 25 April 1946 to Harvey Hall from H.M. McClelland	"
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377	Letter 5 Feb. 1946 from Harvey Hall to Mr. J.W. Crowley, <del>NASX</del> Acting Director of Aeronautical Research, NACA	"
✓ 378	Memo to Commdr. Hall 26 April 1946 from John T. Connor	
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417	Letter, Dec. 9, 1957 from Homer E. Newell to Mr. Edwin L. Weisel giving Newell's philosophy	"
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5-1079	<u>Planetary Quarantine Provisions for Unmanned Planetary Missions</u> , files NASA NHB 8020.12 April 1969.	files
5-1080	MSC Bibliography for Interplanetary Trajectory Studies, July 1967.	files
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5-1085	"Provisional Analysis of Russian Luna 9 Pictures," G. P. Kuiper, R. G. Strom, R. S. Le Poole, and Ewen A. Whitaker, Feb. 9, 1966, revised Feb. 23, 1966.	files
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5-1100	Letter from Schurmeier to Cunningham re Effects of Planetary Quarantine on Mariner M'69, Nov. 15, 1966.	files
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5-1103	<u>A Scientific Satellite Program</u> , Rocket Development Branch, Rocket Sonde Branch, Atmosphere and Astrophysics Division, Electron Optics Branch, Optics Division, Naval Research Laboratory, Washington, D.C., July 5, 1955.	files
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5-1131	<u>Need for Improved Guidelines in Contracting for Research with Government-Sponsored Nonprofit Contractors</u> , Comptroller General of the United States, Feb. 10, 1969.	shelf
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2	Letter dated Mar. 21, 1960 from W. H. Pickering to Dr. A. Silverstein, advising of a technical briefing to be held at JPL during the middle of April, utilizing the Centaur vehicle.	"
3	Letter, Nov. 8, 1960 from T. Keith Glennan to W. H. Pickering, in answer to Pickering's letter of Nov. 2 re manner in which evaluation of Surveyor contracts [study] will be conducted	"
4	Letter April 4, 1961 from E. M. Cortright to Brian Sparks regarding R. J. Parks being designated as a member of the Centaur Management Comm.	"
5	NASA Memo Apr. 4, 1961 from E. M. Cortright to Director of Space Flight Programs, Subject: Status of Ranger, Surveyor and Mariner PDP's	"
6	Surveyor Project Presentation, Space Systems Session, American Management Association Orientation Seminar, May 16-18, 1962, W.E. Giberson	"
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8	Conference Report LPD-9, 3/19/62 by C. I. Cummings of NASA Hq. trip on March 15-16, 1962, discusses Surveyor and Ranger	"
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11	NASA letter from Martin J. Swetnick, Program Scientist, to Charles F. Campen, JPL regarding Surveyor Orbiter Project intended to place a series of attitude stabilized, instrumented spacecraft into close lunar orbits, May 11, 1962.	"

# SOURCE LIST #6

## SURVEYOR

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12	NASA memo Jan. 8, 1963 from Ben Milwitzky to Director, Lunar and Planetary Programs, OSS, Subject: Surveyor Program Discussions, 17 Dec. 1962	Files
13	Project Document No. 1, Rev. No. 1, SURVEYOR SPACECRAFT/LAUNCH VEHICLE INTERFACE REQUIREMENTS, 12/19/63	"
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## SURVEYOR

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16	Letter from O. W. Nicks to R. J. Parks Mar. 16, 1964, confirming plans to establish a NASA Board to review the Surveyor Project.	Files
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17b	Surveyor Project Review, Mar. 23-27, 1964	
18a	Letter from Oran W. Nicks, Director, Lunar & Planetary Programs, OSS, to Robert Parts, JPL, enclosing report on Surveyor Project Rvw.	"
18b	Attachment to above, Surveyor Project Review, March 23-27, 1964 : also Part I, Summary Minutes, March 23, 1964.	"
19	JPL Document, Tech. Report No. 32-1023, Surveyor 1 Mission Report Part 1, Mission Description & Performance, August 31, 1966.	"
20	Project Document No. 6, SURVEYOR SPACECRAFT/DSIF SYSTEM INTERFACE REQUIREMENTS (Rev. 1, Jan. 1, 1964)	"
21	TM No. 33-192 SURVEYOR FOLLOW-ON STUDY, SCIENTIFIC OBJECTIVES, PHASE I: SIGNIFICANCE OF A SUCCESSFUL SURVEYOR BLOCK I LANDING 12/1/64	"
22	TM No. 32-618, SURVEYOR LANDER MISSION AND CAPABILITY, Aug. 1, '64	"
23	NASA memo dated Oct. 12, 1970 from H. E. Newell to Lee Saegesser, Subject: Documents Approved for Release to the NASA Supported Project Reviewing Management Lessons from the Surveyor Project. (Papers dated March, June, July, August, and November of 1964)	"
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25	Centaur Schedule Changes (3 charts), January 15, 1964	"

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27	Project Document No. 1, Rev. No. 2, SURVEYOR SPACECRAFT/LAUNCH VEHICLE INTERFACE REQUIREMENTS, 12/14/65	"
28	Surveyor A-G Project Development Plan, Project Document No. 13, 12/22/65	"
29	Project Document No. 43, Surveyor Block I, Launch Constraints Document, June 11, 1965	"
30	Hughes Document, SURVEYOR SPACECRAFT A-21A Model Description, 1 Jan. 1965 under JPL Contract 950056	"
31	Project Document 32-S/MA, June 11, 1965, <u>Surveyor Mission A Flight Test Objectives.</u>	"
32	Hand notes of Sr. Staff Presentation; Status of HAC Contract; Spacecraft Status, n.d.	"
33	NASA letter, To: R. J. Parks, From: Benjamin Milwitzky, Subject: Recommendations given for Design Review closeout sheets, April 30, 1965	"
34	JPL, <u>Technical Memorandum, 312-558, May 19, 1965</u> , To: Distrib. From: R. G. Chamberlain, Subject: Surveyor Block I Mission Success Evaluation	"

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37	✓ Surveyor I Mission, JPL Release, July 28, 1966. Launching and Description.	Files
38	Surveyor II Mission, JPL Release, Launching and Description September 1966.	Files
39	Technical Memorandum No. 33-264, <u>Surveyor Mission Operations System</u> , April 4, 1966.	Files
40	Symposium On Surveyor 1, Design & Performance, Von Karman Auditorium, September 7 and 8, 1966.	Files
40a	Surveyor 1 Design and Performance Symposium, Trajectory and Maneuver Analysis, C.M.Meredith, HAC.	Files
40b	Surveyor 1 Design and Performance Symposium, Spacecraft System Design, R.G.Forney, JPL.	Files
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40e	Surveyor 1 Design and Performance Symposium, Surveyor Spacecraft Telecommunications, Charles Kirsten, JPL.	Files
40f	Surveyor 1 Design and Performance Symposium, Telecommunication Subsystem Performance, F.K. Rickman, HAC.	Files
40g	<u>Altitude Marking Radar, Radar Altimeter and Doppler Velocity Sensor</u> , Surveyor 1 Design and Performance Symposium, A.C.Lindberg, JPL.	Files
40h	<u>Radar Performance Evaluation</u> , Surveyor 1 Design and Performance Symposium, R.A.Dibos, HAC.	Files
40i	Surveyor 1 Design and Performance Symposium, <u>Flight Control Subsystem</u> , L. D. Runkle, JPL.	Files
40j	<u>Propulsion Subsystem</u> , Surveyor 1 Design and Performance Symposium, A. Briglio, Jr., JPL.	Files
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## SURVEYOR

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40m	Surveyor 1 Design and Performance Symposium, <u>Power</u> Subsystem, L. D. Runkle, JPL.	Files
40n	Surveyor 1 Design and Performance Symposium, <u>Television</u> Subsystem, D. R. Montgomery, JPL.	Files
40o	Surveyor 1 Design and Performance Symposium, <u>Structures</u> and Mechanisms, F. N. Magee, JPL.	Files
40p	Surveyor 1 Design and Performance Symposium, <u>Landing</u> Dynamics, F. B. Sperling, JPL.	Files
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## SURVEYOR

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42	Miscellaneous newspaper clippings of Surveyor V, Sept. 1967	"
43	Interview with Bob Breshears re: Surveyor 5, Oct. 13, 1967	"
44	Interview with James D. Cloud, Hughes Aircraft, Oct. 16, 1967	"
45	IOM 9/15/67 from J. F. McGee to R. Parks/J. Small, Subject: Commendation for Charles Pedretti	"
46	Hughes News, September 15, 1967 re. success of Surveyor V	"
47	Interview with Don Pedretti, October 13, 1967 re Surveyor V	"
48	Project Document No. 1, Rev. NO. 3, SURVEYOR SPACECRAFT/ATLAS-CENTAUR LAUNCH VEHICLE INTERFACE REQUIREMENTS, 9/1/67	"
49	✓ TM No. 32-1086, Surveyor II Mission Report, Mission Description and Shelf Performance, April 1, 1967	Shelf
50	✓ TM No. 32-1177, <u>Surveyor III Mission Report, Part II, Scientific Results</u> June 1, 1967	"
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54	✓ PD 125, May 15, 1967, <u>Surveyor III, Preliminary Science Results</u>	"
55	Report on the Surveyor Project, various articles on Surveyor I from the <u>Journal Geophysical Research</u> , Vol. 72, No. 2, Jan. 15, 1967	Files
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60	IOM Sept. 1, 1967 from S. W. Tuszyński to Surveyor Dist., Subject: Surveyor Mission E. Flight Schedule.	Files
61	L. D. Jaffe, "Surface Structure and Mechanical Properties of the Lunar Maria," <u>Journal of Geophysical Research</u> , Vol. 72, No. 6, March 15, 1967	"
62	Hughes publication entitled <u>Surveyor</u> , Sept. 1967 about Surveyor 5	"
63	JPL Release, Surveyor III Mission, Launching and Description, May 1967.	"
64	JPL Release, Surveyor IV Mission, Launching and Description, July, 1967.	"
65	JPL Release, Surveyor V Mission, launching and Description, September 1967.	"
66	JPL Release, Surveyor VI, launching and Description, November 1967.	"
67	<u>Failure Reporting and Management Techniques in the Surveyor Program</u> , NASA SP-6504, by D.S. Liberman, NASA, F.A. Paul, JPL, and E.F. Grant, Hughes Aircraft Co. 1967.	"
68	Office of Public Information, News Release, Surveyor VI Mission, November 9, 1967.	"
69	✓ TM 32-1023, <u>Surveyor 1 Mission Report, Part II, Scientific Data and Results</u> , September 10, 1966.	Shelf
70	✓ TM No. 32-1023, <u>Surveyor 1 Mission Report, Part III, Television Data</u> , November 1, 1966.	"



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72.	O. W. Nicks, "Applying Surveyor and Lunar Orbiter Techniques to Mars," Dec. 5, 1968, presented to the AIAA	"
73	✓ TM No. 32-1246, <u>Surveyor V Mission Report, Part I, Mission Description and Performance</u> , Mar. 15, 1968	Shelf
74	✓ TM No. 32-1246, <u>Surveyor V Mission Report, Part III Television Data</u> , July 15, 1968	"
75	✓ TM No. 32-1262, <u>Surveyor VI Mission Report, Part I Mission Description and Performance</u> , Sept. 15, 1968	"
76	✓ TM No. 32-1262, <u>Surveyor VI Mission Report, Part II Science Results</u> , Jan. 10, 1968	"
77	✓ TM No. 32-1262, <u>Surveyor VI Mission Report, Part III, TV Data</u> , Aug. 15, 1968	"
78	✓ TM No. 32-1264, <u>Surveyor VII Mission Report, Part II. Science Results</u> Mar. 15, 1968	"
79	✓ TM No. 32-1264, <u>Surveyor VII Mission Report, Part III, TV Data</u> , Sept. 1, 1968	"
80	NASA SP- , Surveyor I, A Preliminary Report - <i>Lost</i>	
81	✓ NASA, SP-166, Surveyor VI, A Preliminary Report, Mar. 1968	"
82	✓ NASA SP-173, Surveyor VII, A Preliminary Report, May 1968	"
83	Report on the Surveyor 5 Project, various articles on Surveyor from <u>Journal of Geophysical Research</u> , Vol. 73, No. 22, Nov. 15, 1968.	Files
84	JPL P68-71 Booklet, "The Surveyor Project" distributed on March 1968	"
85	G. Vitkus, Nortronics; J. W. Lucas, JPL; and J. M. Saari, Boeing "Lunar, Surface Thermal Characteristics during Eclipse from Surveyors III, V and after Sunset from Surveyor V," paper #68-747, presented at AIAA 3rd Thermophysics Conference, June 24-26, 1968	"
86	J. W. Lucas, et. al., "Surveyor 3 Results: Lunar Temperatures and Thermal Characteristics, <u>Journal of Geophysical Research</u> , Vol. 73, No. 12, June 15, 1968	"
87	JPL Release, Surveyor VII Mission, Launching and Description, January 1968.	"

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No.	SURVEYOR Item	Location
88	Surveyor Follow-on Study, Scientific Objectives - Phase 2, undated by JPL Space Sciences Division.	Files
89	Milton Beilock, "Surveyor Lander Mission and Capabilities," undated	"
90	✓ TM No. 32-1177, <u>Surveyor III Mission Report, Mission Description and Performance</u> , No date, Sept. 1, 1967 (still in undated file)	Shelf <del>Files</del>
91	Document, diagrams of Surveyor investigation activities, also How the Apollo 12 astronauts will spend their 31 1/3 hours on the surface of the moon. n.d.	Files
92	Document, Public Information Release, "The Surveyor Project", n.d., Surveyor Photograph included, picture inside shows Earth/Moon Trajectory.	"
93	JPL Office of Public Educational Services Bulletin, Surveyor "Soft-Landing Lunar Spacecraft", NASA, n.d., photos of surface of moon.	"
94	Interview notes, Unmanned lunar, Jim Driscoll, National Observer Prospector, JPL Industry Briefing, best description according to Burke	"
95	Surveyor: National Geographic: "Candid Camera on the Moon," By Homer E. Newell; "The Moon Close UP," Eugene M. Shoemaker, <del>The Surveyor Project, NASA/JPL, Vectors, HAC, Vol. X.</del>	"
96	✓ TM No. 32-1264, <u>Surveyor VII Mission Report, Part 1, Mission Description and Performance</u> , February 15, 1969.	Shelf
97	✓ NASA SP-184, Surveyor Program Results, 1969.	Shelf
98	L. D. Stimpson and J. W. Lucas, JPL, "Revised Lunar Surface Thermal Characteristics obtained from the Surveyor V Spacecraft," paper #69-594, presented at the AIAA 4th Thermophysics Conference, June 16-18, 1969.	Files
99	Surveyor comments by G. Giberson, meeting May 14, 1970	Files
100	Surveyor, Kloman interview of M. McClain May 15, 1970	Files

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## SURVEYOR

<u>No.</u>	<u>Item</u>	<u>Location</u>
101	JPL Document, Project Development Plan (PDP), setting forth technical and management procedures for successful accomplishment of a soft landing on the lunar surface, dated March 23, 1961.	Shelf
102	JPL Document, Surveyor Project Review, dated December 4, 1963.	Shelf
103	Press Kit, Release No. 66-127 (NASA), Surveyor A (to be launched no earlier than May 30, 1966) dated 26 May, 1966.	Shelf
104	NASA News Release, News Conference, Scientific Review of the Preliminary Findings of Surveyor I, dated June 16, 1966.	Shelf
105	NASA Press Kit, Release No. 66-248, Surveyor B (to be launched no earlier than September 20, 1966) dated September 14, 1966.	Shelf
106	NASA Press Kit, Release No. 67-85, Surveyor C, (to be launched no earlier than April 17, 1967), dated April 14, 1967.	Shelf
107	NASA Press Kit, Release No. 67-172, Surveyor D (to be launched no earlier than July 13, 1967), dated July 11, 1967.	Shelf
108	NASA Press Kit, Release No. 67-227, Surveyor V (to be launched no earlier than September 8) dated August 31, 1967.	Shelf
109	NASA News Release, Preliminary Scientific Results from Surveyor V-News Conference, September 29, 1967.	Shelf
110	Hughes Surveyor Spacecraft System, <u>Management Plan for Surveyor Follow-On</u> , SDN 1-59132/22, dated 2 October, 1961.	Shelf
111	Hughes Surveyor Spacecraft <u>Development Plan</u> , No. 2250/17 dated 9 June 1961.	Shelf
112	Hughes Surveyor Spacecraft System, Volume III, <u>Final Sterilization Report: Appendices</u> , June 1963.	Shelf
113	JPL Surveyor Project <u>Quarterly Review</u> , dated 1 February, 1963.	Shelf
114	JPL Surveyor <u>Presentation to the President's Science Advisory Committee</u> , October 7, 1964.	Shelf

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<u>No</u>	<u>Item</u>	<u>Location</u>
115	Hughes document, Surveyor Spacecraft, Lunar Roving Vehicle, Integrated Subsystem Study, JPL Contract 950056, 27 July, 1964.	Shelf
116	Hughes Study Report, Block II Surveyor, March 1964.	Shelf
117	Thiokol Chemical Corporation, Final Report, Surveyor Main Retro Rocket Engine Development Program, June 30, 1964.	Shelf
118	JPL document, Surveyor Project Office Presentation to NASA Office of Manned Space Flight, March 18, 1963	Files
119	Surveyor Folder: Preliminary Results from Surveyor III Analysis; Surveyor III hardware; typed recording, Bean, Conrad. 1970.	Files
120	NASA News Release 65-245, "NASA Will Not Develop Surveyor Roving Vehicle," July 21, 1965.	Files
121	NASA News Release 66-151, "News Conference Set for Review of Surveyor Findings," June 13, 1966.	Files
122	NASA News Release 66-177, "Technical Report on Surveyor I Issued by NASA," July 8, 1966.	Files
123	NASA News Release 66-206, "Computer Work Aids Photography from Surveyor I," August 9, 1966.	Files
124	NASA News Release 66-237, "Second Surveyor 13 Soft Lander Set September 19," dated September 1, 1966.	Files
125	Paper, Surveyor PIO File, including Mission Objectives, Project Cost, Trajectory, n.d.	Files
126	Ace-Federal Reports, "Transcript of Proceedings, NASA Press Conference, Preliminary Scientific Results from Surveyor VII," 28 February 1968.	Files
127	Clipping from NYT, "Hop on the Moon," also Surveyor 6 cartoon, "Easy on the Vermouth!," November 1967.	Files
128	Telephone conversation from C. I. Cummings, JPL, to Ed Cortright; Understanding that Dr. Debus is now in charge of NASA Atlantic Missile Range Operations, dated March 7, 1960.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
129	Hughes document, Lunar Orbiting Reconnaissance System, Volume 1, "Development and Program Plan", June 1961.	Files
130	Hughes document, Surveyor Spacecraft, <u>Development Plan</u> , No. 2251/25, 7 August 1961.	Files
131	Paper, "Surveyor Program Review - Revised Agenda, NASA Headquarters," Agenda, November 1963.	Files
132	Surveyor Folder, including transcript of debriefing at NASA Houston on Surveyor III; memos on same meeting; letter on comments of debriefing of astronauts to Steve Jacobs, MSC, Houston, from E.J. Hawthorne, Hughes Aircraft Co. El Segundo dated December 12, 1969.	Files
133	JPL IOM from Pickering to Senior Staff and Section Chiefs re Surveyor Source Evaluation Board, Nov. 15, 1960.	files
134	<u>JPL Final Progress Report Surveyor Gas Chromatograph</u> , Beckman Instruments, Inc., December 1962.	Shelf
135	Memo for the Record, by Oran Nicks, Head, Lunar Flight Systems, and Benjamin Milwitzky, Lunar Flight Systems, subject: Summary of Visit, NASA Headquarters to JPL, May 2-4, 1960, dated May 12, 1960.	Files
136	Memorandum from Abe Silverstein, Director of Space Flight Programs to Director of Launch Vehicle Programs, subject: Implementation of NASA Management Instruction 4-1-1, March 30, 1961.	Files
137	Letter from Robert C. Seamans, Jr., Deputy Administrator to Mr. L. A. Hyland, Vice President & General Manager, Hughes Aircraft Company, concerning delay in the Surveyor program, dated January 17, 1967.	Files

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No.	Item	Location
6-138	Tentative Experiments for Surveyor "B", Feb. 22, 1962.	files
6-139	Letter from B. Milwitzky to H. M. Schurmeier re companies that have made studies of lunar-spacecraft systems, Mar. 16, 1960.	files
6-140	Letter from Pickering to Silverstein re Industrial Feasibility Studies for the JPL Lunar Program, Mar. 21, 1960.	files
6-142	JPL IOM from W. J. Downhower to Distribution re Surveyor Design Study Phase, Mar. 23, 1960.	files
6-142	JPL IOM from G. P. Kautz and W. J. Downhower to H. M. Schurmeier re Potential Surveyor System Contractors, Mar. 25, 1960.	files
6-143	JPL IOM from J. G. Small to R. A. Lawson re Lunar Soft Landing Spacecraft Briefing, May 2, 1960.	files
6-144	<u>Design Study Requirements for a Lunar Soft Landing Spacecraft</u> , W. J. Downhower, JPL TM 33-13, May 3, 1960.	files
6-145	Letter from R. A. Lawson to Bidders re Bidders Conference Lunar Soft Landing Capsule, Study Program, May 4, 1960.	files
6-146	NASA Memo for the Record from O. W. Nicks re JPL Lunar and Planetary Programs, May 12, 1960.	files
6-147	Lunar Soft Landing Spacecraft - Design Study Bidders Conference, May 13, 1960, Attendees and Agenda.	files
6-148	JPL IOM from W. H. Pickering re Assignment to Source Evaluation Board for Surveyor System Contractor, May 27, 1960.	files
6-149	Lunar Soft Lander Source Selection Board Agenda and Info for the Meeting of June 2, 1960.	files
6-150	Notes for the Second Elimination Meeting of the Source Selection Board, June 23, 1960.	files
6-151	Notes on Surveyor Source Selection Board Meeting, June 13, 1960.	files
6-152	JPL IOM from W. J. Schimandle to C. I. Cummings re Evaluation of Lunar Soft Lander Contractor, June 23, 1960. Contained in a folder of Documents all relating to the Surveyor Source Evaluation Board.	files
6-153	<u>Surveyor A Mission Operation Report</u> , NASA Report No. S-803-66-01, May 9, 1966.	files
6-154	<u>Summary of the Surveyor Program</u> , NASA OSSA Publication, Mar. 1967.	files

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No.	Item	Location
6-155	<u>Centaur Program</u> , Hearings before the Subcommittee on Space Sciences of the Committee on Science and Astronautics, U.S. House of Representatives, 87th Congress, 2d Session, May 15, 18, 1962, No. 4.	files
6-156	<u>Centaur Launch Vehicle Development Program</u> , Report of the Committee on Science and Astronautics, U.S. House of Representatives, 87th Congress 2d Session, July 2, 1962.	files
6-157	Twx from Newell to Pickering re Ceasing Effort on Surveyors H, I, and J, Sept. 30, 1966.	files
6-158	AC-6 Atlas Centaur Development Flight Mission Operation Report, NASA OSSA Report No. S-891-65-05, July 14, 1965.	files
6-159	Letter from R. G. Forney and M. R. McClain to R. Roderick and P. Noal re Performance Incentive Award for Surveyor Mission E, Sept. 14, 1967.	files
6-160	Letter from Pickering to A. E. Puckett re change of Hughes Surveyor Program Manager, Oct. 10, 1967	files
6-161	JPL IOM from Pickering to H. H. Haglund reSurveyor Project Responsibility, Aug. 25, 1967.	files
6-162	NASA Project Approval Document, Surveyor, Nov. 10, 1966, Code Number: 84-840-803.	files
6-163	Surveyor Project and Spacecraft System Personnel, July 1, 1967.	files
6-164	Letter from C. I. Cummings to Leo Stoolman of Hughes re naming of Surveyor, Aug. 3, 1960.	files
6-165	JPL Plan for Saturn C-1/Agena/Spacecraft System Design Effort Oct. 4, 1962.	files
6-166a	Letter from Newell to Sparks re Use of Atlas/Centaur for Lunar and Planetary missions, Oct. 23, 1962.	files
6-166b	TWX from MSFC to H. M. Schurmeier re Conferenne reC-1 Agena Study Program.	files
6-167	"Three Surveyors Eliminated from Program," n.d.	files
6-168	JPL IOM from L. S. Frankenstein re Revision of Surveyor Mission Identification, July 9, 1964.	files
6-169	<u>Requirements for a Roving Vehicle for the Surveyor Spacecraft</u> , JPL EPD-98, June 17, 1963.	files
6-170	JPL Memo to the File re Rough Draft of Letter to Surveyor Scientific Investigators, W. E. Gibefson, Aug. 9, 1963.	files

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No.	Item	Location
6-171	TWX from W. E. Giberson and R. A. Lawson to L. Stoolman and Pl Noal of Hughes re Surveyor Guidelines, Apr. 17, 1963.	files
6-172	Potential Surveyor Experiments with Comments, Oct. 29, 1962.	files
6-173	Centaur Management Chronology, May 18, 1965.	files
6-174	Collection of Documents re Surveyor Decontamination, Sept. 1966.	files
6-175	Saturn C-1 Capabilities Lunar and Planetary, P. Buwalda, JPL Section Report No. 313-1, Apr. 2, 1962.	shelf
6-176	Letters: from Richard E. Horner to Commander of ARDC, from R. E. Horner to Herbert F. York, and from York to Horner, re Centaur Management, June, Aug. 1959.	files
6-177	Historical Background on the Surveyor Vernier Propulsion Program, Feb. 1965.	files
6-178	Documents on Centaur Project Management, July 1960.	files
6-179	JPL News Release re Selection of Hughes for Surveyor, Jan. 19, 1961.	files
6-180	JPL News Release re Surveyor, Feb. 7, 1961.	files
6-181	Chronological Recap of RMD Contract With Hughes Aircraft, Apr. 1961 - Mar. 1964, Feb. 1965.	files
6-182	JPL IOM from W. E. Giberson to Distribution re Trip to NASA Headquarters to Discuss Surveyor Plans, Feb. 8-9, 1962.	files
6-183	JPL Report re Trip to Washington to Discuss Surveyor, Mar. 15-16, 1962, C. I. Cummings.	files
6-184	"Twelve Surveyors Now Planned for Moon," in <u>Missiles and Rockets</u> , June 4, 1962, William Beller.	files
6-185	Letter from Wernher von Braun to H. E. Newell re Centaur Programming Guidelines, July 3, 1962.	files
6-186	Surveyor Project Office, Staff, and System Managers, 1962.	files
6-187	Minutes of the Secpnd Senior Council Meeting for the Office of Space Sciences, Aug. 30, 1962.	files
6-188	"Centaur Redesign Threatens Surveyor," in <u>Missiles and Rockets</u> Hal Taylor, Sept. 10, 1962.	files
6-189	Letter from B. Sparks to Newell re Problems with Centaur, Sept. 13, 1962.	files
6-190	Letter from Sparks to Newell re Aspects of 2 Possible Surveyor Launch Vehicles, Sept. 21, 1962.	files



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No.	Item	Location
6-191	Historical Charts for Surveyor, Oct. 1962.	files
6-192	Information re Visitors for the Surveyor Touchdown, Junel, 1966.	files
6-193	Draft of JPL Lunar Program Long Range Plan, Oct. 24, 1962.	files
6-194	Draft of Surveyor Block I Project Development Plan, Nov. 11, 1963.	<del>files</del> shelf
6-195	JPL IOMs re Surveyor Spacecraft Engineering Problems, Jan. 1964	files
6-196	JPL Report by W. E. Giberson re Telecon with R. Sears re Surveyor T-2 Test failure, Apr. 30, 1964.	files
6-197	JPL Report by W. E. Giberson re Telecon with K. S. Watkins re T-2 Drop Test, Oct. 21, 1964.	files
6-198	JPL Report by W. E. Giberson re Telecon with K. S. Watkins re T-2 Drop Test, Oct. 22, 1964.	files
6-199	JPL IOM from F. H. Felberg to Technical Division Chiefs re Surveyor Project Management of HAC, Nov. 9, 1964.	files
6-200	"Surveyor Day: The Challenges and the Stakes," in Hughes News, Dec. 18, 1964.	files
6-201	JPL IOM from W. E. Giberson to Distribution re Assignment of HAC Contract Responsibility, Feb. 1, 1965.	files
6-202	<u>Surveyor II Proposed Project Development Plan</u> , Hughes SSD 40001P, Nov. 1964.	shelf
6-203	Surveyor Block II Project Development Plan, JPL Project No. 00-84-800-803, Dec. 15, 1964.	shelf
6-204	Centaur Launch Vehicle Management Chronology, Feb. 1965.	<del>files</del>
6-205	JPL IOM from W. E. Giberson to Distribution re Surveyor Project Objectives, <del>A</del> Mar. 24, 1965.	files
6-206	Letter from B. Milwitzky to Giberson with Statements re various aspects of the Surveyor Project, Mar. 4, 1965.	files
6-207	"Surveyor: Congress Sees it Mismanaged From the Beginning," in <u>Space/Aeronautics</u> , Dec. 1965.	files
6-208	Surveyor Project Personnel, Aug. 1, 1966.	files
6-209	JPL Report by W. E. Giberson re NASA Conference for Surveyor C Landing sites, Sept. 30, 1966.	files
6-210	"Report Raps Surveyor Management," in Missiles and Rockets, Heather M. David, Nov. 1, 1965.	files

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No.	Item	Location
6-211	JPL Memo to the File from M. R. McClain re Procurement Justification for Modification 49 to Contract Ø 950056, Oct. 7, 1965.	files
6-212	"To the Moon, Softly," editorial in <u>Missiles and Rockets</u> , William J. Coughlin, Nov. 1, 1965.	files
6-213	JPL IOM from R. J. Parks re Flight Objectives for Surveyor Mission B, July 21, 1966.	files
6-214	O SSA JPL Project Management Report, Surveyor Missions A thru G, Feb. 19, 1968.	files
6-215	JPL IOM from R. J. Parks to Surveyor Personnel, Senior Staff and Scetion Chiefs re Russian Space Shot, Feb. 4, 1966.	files
6-216	Ad Hoc Committee on the Survey of Desirable Lunar Landing Sites, NAS, SSB, Summary of Recommendations, July 31, 1961.	files
6-217	Letter from Nicks to Pickering re Importance of Schedules for Surveyor and Lunar Orbiter, July 19, 1966.	files
6-218	Letter from B. Milwitzky to R. J. Parks re Astronomical Observations for Surveyor, June 1966.	files
6-219	TWX from R. F. Garbarini to R. J. Parks re Surveyor A Objectives, Apr. 26, 1966.	files
6-220	Letter from Parks to Garbarini re Readiness of Surveyor A for Launce, May <del>26</del> 25, 1966.	files
6-221	Letters from Garbarini to Parks and Haglund re Surveyor 1 Success, June 6, 1966.	files
6-222	JPL IOM from R. J. Parks to Distribution re Role Statements in the Surveyor Project Office, Mar. 26, 1965.	files
6-223	JPL IOM from R. J. Parks to Senior Staff and Surveyor Project Personnel re Revised Flight Objectives for Surveyor Mission A, May 9, 1966.	files
6-224	JPL IOM from J. R. David to Distribution re Surveyor Project Manpower Baords, Apr. 1, 1966.	files
6-225	Letter from W. E. Giberson to B. Milwitzky re Surveyor Testing, Sept. 18, 1964.	files
6-226=	JPL IOM from R. J. Parks to Senior Staff, Scetion Managers, Group Supervisors re Surveyor Baock 2 - Roving Vehicle Payload, July 28, 196 <del>6</del> 5,.	files
6-227	Letters re T-2 Test Failure, Dec. 1964.	files

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6-228	Letter from Newell to Pickering re Selection of Ionization Chamber for Surveyor, Dec. 12, 1961.	files
6-229	Letter from Newell to H. V. Neher re Selection of his Experiment for Surveyor, Dec. 11, 1961.	files
6-230	TWX from B. Milwitzky to W. E. Giberson re SSSC Approved List of Experiments for Surveyor, Oct. 10, 1962.	files
6-231	Letter from <u>H. E. Newell</u> to Surveyor Experimenters re reduced list of <del>Experiments</del> for Surveyor Block I, Nov. 1, 1962, with cover letter.	files
60232	TWX from B. Milwitzky to W. E. Giberson re Meeting to Discuss Surveyor problems, July 31, 1962.	files
6-233	TWXs between JPL and NASA Headquarters re Eliminating Sterilization Requirements for Ranger and Surveyor, Dec. 1962.	files
6-234	Letter from W. E. Giberson to C. Sonett re Recommended Experiments for Surveyor, Feb. 24, 1961.	files
6-235	Letter from N. W. <u>Cummingham</u> to W. E. Giberson re Potential Experiments for Future Surveyor Missions, Feb. 15, 1962.	files
6-236	Letter from A. Silverstein to Pickering re SSSC Approved Experiments for Surveyor, Sept. 22, 1961.	files
6-237	Letter from W. E. Giberson to B. Milwitzky re Surveyor Project Objectives and Flight Objectives for Surveyor Missions A-D, Jan. 8, 1965.	files
6-238	Letter from O. W. Nicks to A. R. Luedecke re Surveyor Block I and Follow-On Programs, Jan. 7, 1965.	files
6-239	Letter from Robert R. Gilruth to Pickering re Firing Vernier Engine on the Moon, Aug. 22, 1966.	files
6-240	NASA Memo from H. E. Newell to Director of Launch Vehicle and Propulsion Programs, July 18, 1967, re Review of Surveyor 4.	files
6-241,	Letter from E. M. Cortright to C. I. Cummings re TV for Surveyor, June 20, 1961,	files

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No.	Item	Location
6-242a	Letter from B. Milwitzky to L. D. Jaffe re Memoranda of Agreement with Surveyor Principal Investigators, Oct. 5, 1965.	files
6-252b	Letter from B. Milwitzky to W. E. Giberson re Memoranda of <del>the</del> Agreement with Surveyor Principal Investigators, Nov. 21, 1963.	files
6-243	Letter from Newton W. Cunningham to W. E. Giberson re Surveyor files Experiments Status, July 28, 1961.	
6-244	JPL IOM from P. Shlichta to Distribution re Vega Payload for Lunar Surface Photography, Nov. 23, <del>1958</del> 1959.	files
6-245	JPL IOM from J. David to Distribution re HAC Fixed Fee Proposal Mar. 8, 1966.	files
6-246	Committee on Science and Astronautics Memo for G. P. Miller re Review of NASA Unmanned Lunar and Planetary Program, Dec. 22, 1965.	files
6-247	Conference of the House Space Science and Application Subcommittee, held at JPL, Sept. 2, 1965.	files
6-248	Folder of Documents re Investigation of Hughes Management of Surveyor Project, May 1966.	files
6-249,	<u>Surveyor A-G Project Development Plan</u> , Volume I, Project <del>Development</del> Document No. 13, Jan. 3, 1966.	shelf
6-250	Charts Presented to the Members of the House Space Science and Applications Subcommittee by Hughes, Nov. 30, 1965.	shelf
6-251	<u>Surveyor Spacecraft SC-2 Mission Failure Review Board Report</u> JPL Project Document 108, Jan 10, 1967.	shelf
6-252	Surveyor Spacecraft Backup Material for Congressional Hearing, 1965.	shelf
6-253	Surveyor Project (Missions A-G) Congressional Backup, Feb. 10 1966.	shelf
6-254	<u>Surveyor Project Design Review (April/May 1964) Response/Status Report</u> , JPL Surveyor Project Office, Feb. 15, 1965.	shelf
6-255	<u>Surveyor Design Review Task Team Report, Section I</u> , 1964.	shelf
6-256	<u>Surveyor Project Final Report</u> , Part 1. Project Description and Performance, Volume 1, JPL TR 32-1265, July 1, 1969.	shelf

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No.	Location	Item
6-257	<u>Surveyor Project Final Report, Part 1: Project Description and Performance, Volume II, JPL TR 32-1265, July 1, 1969.</u>	shelf
6-258	<u>Surveyor Project Final Report, Part 2: Science Results, JPL TR 32-1265, June 15, 1968.</u>	shelf

# SOURCE LIST #7

## DSN

<u>No.</u>	<u>Item</u>	<u>Location</u>
1	JPL Publication No. 135, Description of World Network for Radio Tracking of Space Vehicles, July 1, 1958, ORDCIT Project Contract No. DA-04-495-Ord 18.	Files
2a	NASA memo dated Aug. 16, 1961, from O.W. Nicks, Chief, Flight Systems, Lunar & Planetary Programs, for Director of Space Flight Programs, Subject: DSIF support for the Blue Scout Project.	"
2b	NASA letter from A. Silverstein, Director of Space Flight <del>Programs</del> to Commander of the Pacific <del>Missile</del> Missile Range, Point Magu, Calif, no date but it is in answer to a letter dated 3 Mar. 1961, Subject: Support of USAF Blue Scout Jr. Launchings.	"
3	J.W. Thatcher, "Ground Stations for Deep Space Exploration," <u>Sonderdruck</u> <del>aus dem Jahrbuch</del> 1963 der WGLR, pp. 406-427.	"
4	J.W. Thatcher, "Deep Space Communication," <u>Space/Aeronautics</u> , July, 1964" <del>pp. 54-63</del>	"
5	JPL document, no date, entitled "The Tracking and Communication Network for Deep Space Missions," includes review of the stations.	"
6	JPL PIO document, Dec. 9, 1964, "The Tracking and Communication Network for Deep Space Missions," includes brief reviews of stations then in operation.	"
7	JPL IOM from R.R. Wilford, 9/24/65 to Phil Neuhauser, Subject: Taped Interview concerning Robledo de Chavela DSN Station for Voice of America.	"
8	NASA Press Kit, Release No. 66-88 April 26- 1966, Project: Goldstone Dedication (April 29, 1966) [210']	"
9	Dedication Day Schedule, 29 April 1966	"
10	Dr. Eberhardt Rechtin, "Communications to the Moon and Planets," <u>Proceedings of the Radio Club of America</u> , Vol. 42, No. 1, April 1966	"
11a	Note to Editors from F.J. Colella of PIO, re dedication program 4/29/66	"
11b	JPL Press Release, April 26, 1966, "The 210 Antenna."	"
12	Document, no title, no date with subtitle, "The Deep Space Instrumentation Facility."	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
13	<del>TX</del> JPL Technical Memo No. 33-205, <u>DSIF: Goldstone</u> , 1965	Files
14	JPL Technical Memo No. 33-207, <u>DSIF: Tidbinbilla</u> , 1965	"
15	JPL Technical Memorandum No. 33-223, <u>DSIF: Woomera</u> , <del>1965</del> 1965	"
16	JPL Technical Memorandum No. 33-224, <u>DSIF: Johannesburg</u> , 1965	"
17	JPL Technical Memorandum No. 33-257, <u>DSIF: Cape Kennedy</u> , 1966	"
18	JPL Technical Memorandum No. 33-258, <u>DSIF, Robledo</u> , 1965	"
19	JPL Technical Memorandum No. 33-284, <u>DSIF: Ascension Island</u> , 1966	"
20	JPL Booklet, <u>The 210-Foot-Diameter Deep Space Network Antenna</u> , Dedication April 29, 1966, Goldstone, Calif.	"
21	JPL, TM 33-293, <u>The Deep Space Network</u> , June 1966	"
22	IOM No. 128, Jan. 23, 1964, from B. Sparks to Senior Staff, et. al., Subject: Deep Space Network Appointments	"
23	NASA memo from D.P. Hearth to O.W. Nicks, Jan. 17, 1964, Subject: Project costs for SFOF.	"
24a	Letter dated Nov. 3, 1964 from H.E. Newell to Dr. Pickering, enclosing policy as listed below:	"
24b	Enclosure for above, <del>dated Aug. 13, 1964</del> POLICY ON THE UTILIZATION FOR SCIENTIFIC PURPOSES OF TRACKING DATA FROM THE DEEP SPACE NETWORK [NASA's modification]	"
24c	Document dated Aug. 13, 1964 POLICY ON THE UTILIZATION FOR SCIENTIFIC PURPOSES OF TRACKING DATA FROM THE DEEP SPACE NETWORK. [x JPL's version of the proposed policy]	"
<del>24</del>		
25	Preliminary draft of the "History of The Deep Space Network, from the Beginning to 1 Jan. 1969."	"
26	Draft copy of "The DSN Back-Up Role in the MSFN," Nov. 5, 1965, Deep Space Network Office, JPL.	"
27	EPD-455 <u>The Deep Space Network Engineering and Operations Role for Project Apollo</u> , Feb. 1, 1967	"
28	Letter dated Mar. 11, 1963 to Dist. from Robert C. Seamans, Subject: Management Plan for the Manned Space Flight Network.	"
28a	Enclosure dated Feb. 5, 1963 to above letter, "Management Plan for etc. (This document reflects responsibilities of GSFC and JPL in MSN)	"

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<u>No.</u>	<u>Item</u>	<u>Location</u>
29	Memo of Understanding between E.C. Buckley, Director of NASA OMDA and W.H. Pickering, concerning participation of the DSIF in the Manned Space Flight Program, dated March 19, 1963	Files
30	IOM July 28, 1965 from E. Rechtin to DSN Executive Committee, Subject: New Definition of the JPL/DSN Role for Project Apollo.	"
31	NASA IOM Nov. 18, 1965 from Assistant Director for Flight Operations, (Cris C. Kraft, Jr.) of MSC to NASA Headquarters (E.E. Christensen), Subject: Deep space support requirements for translunar, lunar stay, and transearth support.	"
32	JPL IOM dated Jan. 7, 1966 from D.W. Curkendall to P.S. Goodwin, Subject: Thoughts and REcommendations Concerning JPL's Participation in the Apollo Program.	"
33	Letter dated Nov. 4, 1966 from E. Rechtin to G.M. Truszynski, NASA, Subject: JPL System Division Apollo Role Statement Revisions resulting from New Fiscal <del>1966</del> '67 guidelines.	"
34	Tech Memo No. 33-83, <u>System Capabilities and Development Schedule of the Deep Space Instrumentation Facility, 1964-68, (Rev. 1)</u> , Apr. 24, 1964.	"
35	One-Page pamphlet, undated, "DSN Mission Support."	
36	Technical Memorandum 33-452, Volume II, "Deep Space Network Support of the Manned Space Flight Network for Apollo", 1969-1970, NASA, F. M. Flanagan, R. B. Hartley, N. A. Renzetti, JPL, May 1, 1971.	"
37	JPL, "The General Problem of Data Return from Deep Space, NASA, July 15, 1968, by J. R. Hall, K. W. Linnes, D. J. Mudgway, A. J. Siegmeth and J. W. Thatcher	"
38	JPL, "An History of the Deep Space Network to 1, Jan. 1969, April 1, 1971	"
38	Technical Report 32-1533, Volume I, "A History of the Deep Space Network," From Inception to January 1, 1969, N. A. Renzetti, September 1, 1971.	"
38	a. JPL Memo to Distribution from N. A. Renzetti, subject: History of the DSN, February 3, 1971.	Files
	b. JPL Document, <u>A History of the Deep Space Network to 1 January 1969, dated January 15, 1971.</u>	Files
39	Spacecraft Justification-Program STN Chart, DSIF Station or Facility—Date of Initial Construction, etc. (Pioneer III & IV, Apollo, Echo II, Venus, Ranger, Mariner IV. (Filed for DSIF Reference), n.d.	Files



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<u>No.</u>	<u>Item</u>	<u>Location</u>
40	Report, Prepared by the Subcommittee on Aeronautics and Space Technology of the Committee on Science and Astronautics, U.S. House of Representatives, Ninety-Third Congress, Second Session, Serial V, "Tracking and Data Acquisition Program," September 1974.	Files
41	Technical Report, 32-59, The Goldstone Station Communications and Tracking System for Project Echo, edited by Robertson Stevens and Walter K. Victor, JPL, December 1, 1960.	Files
42	NASA CR-140390, Histories of The Space Tracking and Data Acquisition Network (STADAN), The Manned Space Flight Network (MSFN), and the NASA Communications Network (NASCOM), by William R. Corliss, June 1974.	Shelf
43	"Memorandum of Understanding," (as reprinted in 7-42:323) between E.C. Buckley, Director of NASA Tracking and Data Acquisition and W.H. Pickering, Director of JPL., concerning participation of Deep Space Instrumentation Facility in Manned Space Flight Program, April 30, 1963.	Files

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44. JPL IOM from E. Rechtin to R. Parks and C. Cummings re possible use of DSIF ranging instrumentation, 3 April 1961.
45. JPL IOM from E. Rechtin to Koukol, Renzetti, Stevens, and Victor re AD RANGING EXPERIMENT FOR RANGER FOLLOW-ON, 23 June 1961.
46. JPL IOM from E. Rechtin to H. Lawrence re AD RANGING EXPERIMENT FOR RANGER FOLLOW-ON, 12 July 1961, with JPL IOM to Rechtin on same subject, 7 July 1961.
47. JPL IOM from C. Gates and T. Hamilton to all concerned re the utility of ranging, 24 July 1961.
48. Memo from W. Giberson to C. Cummings re DSIF Ranging, 1 August 1961.
49. JPL IOM from E. Rechtin to J. D. Burke re S-Band and Ranging Development in the Ranger Follow-on and Mariner Programs, 15 September 1961.
50. JPL IOM from E. Rechtin to R. Parks and C. Cummings re Ranging System Philosophy, 15 February 1962.
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55. JPL IOM from W. Merrick and H. Bell to V. Larsen re Vendor Selection for Large Ground Antennas, 1 April 1959.
56. SPACE COMMUNICATIONS, by Henry L. Richter, 1 April 1959.
57. JPL IOM from E. Rechtin to J. James and D. Schneiderman re Post-Encounter Tracking of Mariner IV, 11 June 1965, with IOM to E. Rechtin from Victor/Koukol, same subject, 8 June 1965.
58. JPL IOM from A. Hibbs to E. Rechtin re DeepSpace Net Requirements, 27 August 1959.
59. GOLDSTONE COMMUNICATIONS STATIONS: FOR PRESS RELEASE, with letter of approval for release from JPL to J. Campbell, 25 September 1962.
60. Letter from E. Buckley to W. Pickering re Processing of Space Science Flight Experiment Data, 1967.
61. JPL IOM from E. Rechtin to R. Parks re Processing of Flight Data, 31 July 1967.

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- 64. JPL IOM from E. Rechtin to G. Truszynski re Apollo Tracking Support by JPL-DSIF, 11 October 1962.
- 65. Minutes of the First Meeting of the Apollo Communications and Tracking Steering Panel, 28 June 1963.
- 66. Letter from R. Stevens of JPL to G. Truszynski of OTDA re advanced antenna system work for 11/16-12/15, 1961, 22 December 1961.
- 67. Memo rough draft from E. Rechtin to Pickering and Sparks re Meeting with OTDA in Washington 29 August 1963, 3 September 1963.
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- 73. Report to the Congress, Need for Improved Guidelines in Contracting Files  
for Research with Government-Sponsored Nonprofit Contractors,  
Dept. of Defense, Atomic Energy Commission, National Aeronautics  
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	<u>NO.</u>	<u>ITEM</u>	<u>LOCATION</u>
1	60-1	Jack N. James, Planetary Program Organization Chart, Aug. 16, 1960	Files
2	60-2	Preliminary Design Phase, Planetary A Cognizant Engineer List, August 26, 1960.	"
3	60-3	JPL, IOM from V.C. Clarke to Distribution, Subject: Preliminary Standard Trajectories to Venus in 1962 <del>XXX</del> (Rev. 1), Aug. 30, 1960.	"
4	60-4	JPL, IOM from <del>XX</del> R.J. Parks to Distribution, Subject: Mariner A Development Operation Plan, with Plan as attachment, Nov. 29, 1960.	"
5	60-5	JPL, IOM from F. Fairfield to Distribution, Subject: Minutes of First Planetary Program Design Status Review Meeting held December 6, 1960.	"
6a	58-1a	Critique by R.H. Goddard, Article by James R. Randolph, "Can We Go To Mars?", <u>Scientific American</u> , August 1928.	"
6b	58-1b	James R. RAndolph, "Can We Go To Mars?", <u>Scientific American</u> .	"
7	61-1	<del>NASA memo for files from H.E. Newell, Deputy Director, Space Flight Programs, 18 March 1961, subj: Telephone conversation between Dr. Hibbs, JPL, and H.E. Newell, NASA, 13 March 1961.</del>	"
8	62-1	Memo (JPL) to R.J.Parks from F.H.Felberg, subj: Planetary Entry Capsules, 5 November 1962.	"
9	62-2	NASA memo for Director, Lunar and Planetary Programs from Fred D. Kochendorfer, Chief, Mariner Programs, Lunar & Planetary Programs, Office of Space Sciences, subj: Planetary Program Discussions, December 17, 1962.	"
10	62-3	JPL pamphlet, undated, "The Mariner Mission - 1962."	"
11	62-4	JPL PIO News Release of August 15, 1962, <u>Mariner 2 Spacecraft</u> .	"
12	62-5	<u>Reliability Assessment of the Mariner Spacecraft</u> , PRC R-293, prepared by Planning Research Corporation, 17 December 1962.	"

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<u>Item</u> <u>No.</u>	<u>Item</u>	<u>Location</u>
13 63-1	NASA Memo for the record, Jan. 3, 1963, from Donald P. Hearth, Chief, Advanced Programs, Lunar & Planetary Programs, Subject: Voyager/Mariner B Discussions, Dec. 17, 1962.	Files
14 63-2	Letter, January 5, 1963, from O.W. Nicks, Director, Lunar & Planetary Programs, Office of Space Sciences, to Dr. Pickering, in which he refers to the Directors' Council meeting on Jan. 3-4, regarding elimination of Mariner R in 1964.	"
15 63-3	Document, <u>JPL, Mariner 2 Flight Performance Report by Spacecraft Data Analysis Team, EPD-149, 22 February 1963.</u>	Shelf
16 63-4	JPL Document, <u>Space Flight Operations Memorandum, Mariner-R 1962 Mission, EPD-141, February 28, 1963.</u>	Shelf

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<u>NO.</u>	<u>ITEM</u>	<u>LOCATION</u>
17 . 64-1	JPL, PIO, Press Kit Oct. 29, 1964, <u>Mariner Mars 1964 Press Kit</u>	Files
18 . 64-2	Some Project Review Notes on Mariners, Feb. 2x 5, 1964 [G. Kautz]	"
19 . 64-3	Mariner C Life Tests, Estimated Start Dates, also Life Test Philosophy, March 5, 1964.	"
20 . 64-4	Mariner C Project Development Plan, PD-7, Addendum 1, July 15, 1964	"
21 . 64-5	JPL Tech. Memo 33-189, <u>Temperature Control. A Case History of the Mariner Spacecraft</u> , Nov. 16, 1964	"
22 . <del>64-6</del>	Mariner Mars '64 Technical Bulletin, [Mariner III], Nov. 9, 1964	"
23 . 64-7	Mariner Mars '64 Technical Bulletins, [Mariner IV], Nov. 30, 1964 through Dec. 21, 1964.	"
24 . 64-8	Revision of the Mariner C configuration drawing J 4190502, as of 10-16-64, transmitted by IOM Dec. 3, 1964 from W.W. Hough to Dist.	"
25 . 64-9	Section Report No. 352-6, JPL, <u>Evaluations and Recommendations Pertaining to Mariner C Fiberglass Honeycomb Shroud</u> , N. E. Johnson, et al, December 15, 1964.	Shelf
26 . 64-10	<u>Reliability Assessment of the 1964 Mariner Mars Spacecraft</u> , PRC R-362, prepared for JPL by Planning Research Corp., July 22, 1963.	Shelf

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<u>NO.</u>	<u>ITEM</u>	<u>LOCATION</u>
27 65-1	NASA News Conference, "Mariner IV, Interim Science Findings" April 19, 1965.	Files
28 65-2	JPL Tech. Report No. 32-740, <u>Mariner Mars 1964 Project Report: Mission and Spacecraft Development, Vol. 1. From Project Inception through Midcourse Maneuver</u> , March 1, 1965	Shelf
29 65-3	JPL Tech. Report No. 32-740, <u>Mariner Mars 1964 Project Report: Mission and Spacecraft Development, Vol. II. Appendixes</u> , Mar. 1, 1965	"
30 65-4	CIT, "Suggestions for Martian Exploration Following Mariner IV", February 23, 1965	Files
31 65-5	JPL/NASA Document, <u>Mariner IV Pre-Encounter Press Conference</u> , JPL Auditorium, June 22, 1965.	Files
32 65-6	<u>Mariner IV Log</u> , (Events, Times, Remarks), JPL, June 30, 1965	Files
33 65-7	JPL/NASA, <u>Mariner IV Encounter Sequence at Mars</u> , June 22, 1965.	Files
34 65-8	Bulletin, JPL, <u>Mariner-Mars, An Interplanetary Spacecraft</u> , June 1, 1965.	Files
35 65-9	<u>Engineering Opportunities</u> , Vol. 3- No. 7, "Mariner-IV Nears Mars", Thomas L. Branigan, Editor, <u>Space Log</u> , TRW Systems, pp. 9-16, July, 1965.	Files
36 65-10	<u>Science Digest</u> , The Astronomy Story, "Obituary of a planet", October 1965, p. 8.	Files
37 65-11	<u>Independent Star-News</u> , Editorial, "A Stirring Report", statement by DuBridge regarding epochal flyby of Mars last July of Mariner IV, December 5, 1965.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
38 . 66-1	H.J. Stewart, "New Possibilities for <sup>Solar</sup> Star-System Exploration," from <u>A&amp;A</u> , December, 1966	Files
39 . 66-2	NASA Document EP-39, <u>Report from Mars</u> , Mariner IV 1964-1965, GPO, 1966.	"
40 . 66-3	JPL Technical Memo 33-302, <u>Mariner: Journey <del>Around</del> Around the Sun</u> , 1966.	"
41 . 66-4	JPL Engineering Planning Document 350, <u>Mariner Venus 67, Project Policy and Requirements</u> , May 18, <del>1969</del> 1966.	"
42 . 66-5	JPL Technical Report No. 32-881, <u>Mariner Mars 1964 Project Report: Shelf Mission Operations</u> , June 15, 1966	
43 . 66-6	Preliminary JPL Project Document No. 70, <u>Mariner Venus 67, Project Development Plan</u> , June 30, 1966	Files
44 . 66-7	P.T. Lyman, <u>Engineering Mechanics Division Historical Summary--Mariner C</u> , July 8, 1966.	Shelf
45 . 66-8	JPL Technical Memo. No. 33-278, Rev. 1, <u>Mariner Mars 1964 Flight Dynamic Data</u> , Sept. 15, 1966	Files
46	JPL Memo to Distribution from R. J. Parks, subject: Mariner Re-programming, concerning major changes in the Planetary Program, and termination of activities on Mariner A, September 6, 1961.	Files



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<u>NO.</u>	<u>ITEM</u>	<u>LOCATION</u>
47	67-1 NASA, <u>Summary of the Mariner Program</u> , February 1967	Files
48	67-2 JPL, PIO, undated, <u>Mariner V, Venus 1967 Encounter, Press Kit</u>	"
49	67-3 JPL, Tech. Report 32-882, <u>Mariner Mars 1964 Project Report: Spacecraft Shelf Performance and Analysis</u> , Feb. 15, 1967	
50	67-4 JPL Project Document No. 71, <u>Mariner Venus 67, Project Documentation Files Plan</u> , April 20, 1967	
51	67-5 NASA SP-139, <u>Mariner-Mars 1964, Final Project Report</u> , 1967	Shelf
52	67-6 Mariner V Scientific Results, <u>Science</u> , December 29, 1967	Files
53	67-7 Excerpts from James Webb letter on Soviet Planetary Probes, to Chairmen of Congressional Space Committees, September 5, 1962.	Files
54	67-8 JPL Doc. Mariner Venus/Mercury 70 (MVM70) Mission Feasibility Study, 760-14, September 19, 1967.	Shelf
55	67-9 NASA, <u>Mariner-Venus 1967 Final Project Report</u> , SP-190, 1971.	Shelf
	68-1 James H. Wilson, JPL Tech Memo 33-393, <u>Return to Venus</u> , July 1, 1968.	Files
57	68-2 JPL Technical Report 32-1249, <u>Mariner Venus 67 Spacecraft Environmental Test Results</u> , June 15, 1968.	Shelf
58	68-3 JPL Technical Report 32-883, <u>Mariner Mars 1964 Project Report: Scientific Experiments</u> , July 15, 1968.	Shelf

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59 . 69-1	<del>MM</del> James E. Long, "To the Outer Planets," <u>A&amp;A</u> , June 1969	Files
60 . 69-2	Viking <del>Management</del> Project Management, "1973 Viking Voyage to Mars," <u>A&amp;A</u> , November 1969	
61 . 69-3	JPL, PIO News <del>REXXXXX</del> Kit, Feb. 14, 1969, "Project: Mariner Mars '69'"	
62 . 69-4	NASA Press Kit, Release No. 69-26, "Project: Mariner Mars '69"	"
63 . 69-5	Mariner Mars 69 Status Bulletins, from Feb. 17 to Nov. 3, 1969	"
64 . 69-6	JPL, PIO, release of July 18, 1969, <u>Mariner 6/Mariner 7 Nearing Mars</u>	"
65 . 69-7	JPL Foldout, undated, "Marinef Mars 1969, Pictures and Results from Mariner VI and VII."	"
66 . 69-8	NASA SP-225, <u>Mariner-Mars 1969, A Preliminary Report</u> , <del>XXX</del> 1969	"
67 . 69-9	JPL Tech. Report 32-1203, <u>Mariner Venus 67 Final Project Report: Vol. II, Midcourse Maneuver Through End of Mission.</u>	Shelf
68 . 69-10	Letter, JPL Office of the Director, To: All Personnel, From: W. H. Pickering, Subject: Mariner '69 Status, May 29, 1969.	<i>Files</i>

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69 70-1	Robert <del>R.</del> Leighton, "The Surface of Mars," <u>Scientific American</u> <del>IN</del> May 1970, Vol. 222, No. 5, pp. 26-41.	Library
70 70-2	Letter, Feb. 13, 1970, from George E. Henry to Dr. Homer J. Stewart of JPL, requesting information on planetary exploration for a magazine.	Files
71 70-3	Letter, Feb. 23, 1970, from H.J. Stewart to George E. Henry, <del>ANSWER</del> answering the above.	"
72 70-4	Table of Contents from May 1970 <u>A&amp;A</u> [Planned Deep Space Flights.]	"
73 70-5	JPL TM 33-459, December 1970, James H. Wilson, <u>Two Over Mars, Mariner VI and Mariner VII</u> , February to <del>August</del> August, 1969	"
74 70-6	JPL Tech. Report 32-1460, Vol. 1, <u>Mariner Mars 1969 Final Project Report, Development, Design and Test</u> , Nov. 1, 1970	Shelf
75 71-1	Bulletin (3) showing the status of Mariner Mars, May 6, May 10, and May 25, 1971. (Two Days to Go, Mariner 8 Lost at Sea, and Mariner 1 Launch Scheduled May 29, 1971), JPL.	Files
76 71-2	Leaflet No. 501, Astronomical Society of the Pacific San Francisco California, <u>Lowell's Theory of Life on Mars</u> , by Norriss S. Hetherington, Atkinson College, York University, Ontario. Percival Lowell announced in February 1894 that he would establish an observatory in the Arizona Territory and search for signs of intelligent life on the planet Mars.	Files
77	JPL Memo from E. Cutting to R. Cargill Hall, subj: Early History Leading to the MVM'73 Mission, 6 March 1973.	Files
78	JPL Memorandum from H. Margraf to H. M. Schurmeier, subject: Resume of Actions Resulting from the Mariner-1 Failure, August 8, 1962, including Report to the Guidance Panel of the Mariner R-1 Evaluation Board dated 2 August 1962.	Files
79	Folder, MV'67 Science Payload, including letters, memos and teletypes; document, Mariner-C Venus Mission Feasibility Study, 1966.	Files
80	NASA/JPL Document, <u>Mariner 10 Venus Encounter</u> , Press Briefing, Transcript of Tape Recordings and Questions and Answers, February 7, 1974.	Files
81	JPL Office of Public Information, <u>Mariner Venus-Mercury Press Kit</u> , for release October 29, 1973.	Files

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<u>No.</u>	<u>Item</u>	<u>Location</u>
8-82	Document, Office of Public Information, JPL, CALTECH, NASA, Pasadena, CA, For Release March 19, 1974, <u>Mariner 10, Mercury Encounter Press Kit.</u>	Files
8-83	JPL Document, <u>Mariner Mars 1971, Martin Co. Industry Day, JPL Presentation, consisting of Mariners II, IV &amp; V pictures, results, TV coverage; mission characteristics, 20 June, 1969.</u>	Files
8-84	NASA/JPL Technical Report 32-1550, Volume IV, <u>Mariner Mars 1971 Project Final Report, Science Results, prepared by Mariner Mars 1971 Science Experimenter Teams, July 15, 1973.</u>	Shelf

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8-85	<u>Imaging of Mercury and Venus from a Flyby</u> , Bruce C. Murray et al., reprinted from Icarus, Vol. 15, no. 2, Oct., 1971.	files
8-86	<u>Missions to Mars</u> , JPL Document, Mariner Mars 1971, May 1971.	files
8-87	<u>Mission to Mars</u> , JPL Document, Mariner Mars 1971, July 1971.	files
8-88	<u>Pocket Guide to Mariner C</u> , JPL Document, Dec. 1, 1963.	files
8-89	<u>Mariner Mars 1964 Handbook</u> , Robert Van Buren, NASA, Dec. 1, 1965.	shelf
8-90	<u>Mariner Mars 1969 Handbook (Mariner 6 and 7)</u> , NASA, July 28, 1969.	shelf
8-91	<u>Mariner Mission to Venus</u> , prepared by JPL, McGraw-Hill Book Co., Inc., 1963.	shelf
8-92	<u>Mariner Venus 1962 Final Project Report</u> , NASA, 1965.	shelf
8-93	<u>Mariner 9 and the <del>ELX</del> Exploration of Mars</u> , Robert J. Parks, 1971(?).	files
8-94	Technical background leading to Mariner Venus Mercury 1973, draft prepared by R. J. Parks, Jan. 1, 1975.	files
8-95	Historical discussion of Mariner Mars 1971, material used in <del>J</del> H. J. Stewart's class, n.d.	files
8-96	News Releases and photos re. testing of a heat sterilized land craft, may-June, 1968.	files
8-97	Mariner 1967 Project Key Personnel and cognizant Engineer list, Jan. 5, 1967.	files
8-98	Mariner '67 Temperature Control Design Review Notes, n.d.	files
8-99	<u>Mariner Venus Mercury 1973 Mission Specification and Plan, Part II-- Mission Plan</u> , D. L. Shirley, JPL Document, n.d.	shelf
8-100	Mariner Venus '67 UV Photometer Out-Gassing Test No. 1 Results, Aug. 1966.	shelf
8-101	JPL IOM From J. D. Burke to R. J. Parks and C. I. Cummings re Telephone Call from F. E. Goddard re Centaur, May 19, 1960.	files
8-102	JPL IOM from B. A. Waitman to Distribution re Telecon with Dave Reese of Ames re "Small Mars Entry Probe", Jan. 13, 1966.	files

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8-103	TWX from NASA HQ to J. N. James and Robert Crane re probes for Mariner Mars '69, Jan. 25, 1966.	files
8-104	<u>Evaluation of the Feasibility of Incorporating an Atmospheric Probe on the Mariner Mars '69 Mission</u> , JPL,ARC,AWCO, Jan, 1966.	files
8-105	JPL IOM from B. Dayman to H. M. Schurmeier re Mariner Mars '69 Atmosphere Probe, Jan. 31, 1966.	files
8-106a	Letter from H. Julian Allen to J. N. James and H. M. Schurmeier re working relationship between Ames and JPL for Mars atmosphere probe, Feb. 23, 1966.	files
8-106b	Letter from J. F. Parsons to NASA HQ re Ames responsibility re Mars Atmosphere Probe, Feb. 21, 1966.	files
8-107a	Letter from J. N. James to O. W. Nicks re JPL's plan for management of the Ames type atmospheric probe, Mariner Mars 1969, mar. 10, 1966.	files
8-107b	Reply from O. W. Nicks to J. N. James re JPL Mariner Mars '69 atmosphere probe management plan, Mar. 21, 1966.	files
8-108	Letter from A. R. Luedecke to E. M. Cortright re effect on planning, manpower, funding, etc. of the Mariner Mars '69 atmosphere probe on JPL, March 25, 1966.	files
8-109	JPL IOM from R. P. Thompson to H. M. Schurmeier re Review of Goddard Space Flight Center's Mars Atmospheric Probe Proposal, Apr. 11, 1966.	files
8-110	Letter from R. L. Heacock to G. C. Pimentel re Design Review of Nov. 21 for Mariner Mars '69, Dec. 19, 1966.	files
8-111	Letter from C. C. Cook to N. W. Cunningham and E. Glahn re Mariner Mars '69 Proposal Package, June 15, 1966.	files
8-112	Documents re Planetary Approach Guidance Experiment for Mariner Mars '69, 1966.	files
8-113	Letter from J. A. Stallkamp to G. C. Pimentel re priority of six experiments for Mariner Mars '69, June 30, 1966.	files
8-114	Letter from H. M. Schurmeier to G. Neugebauer re <u>Memorandum of Agreement Mariner Mars 1969 Project Surface Temperature Investigation</u> , enclosed, August 12, 1966.	files

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No.	Item	Location
8-115	JPL Report re Letter Contract with the University of California files for the Mariner Mars '69, IRS, Aug. 22, 1966.	
8-116	Draft of a news release, "Honeywell to Control 1969 Mars Spacecraft", D. Saunders, Aug. 26, 1966.	files
8-117	Documents re background on contract with the University of California for the Mariner Mars '69 IRS, Sept. 1966.	files
8-118	"Radiative Relaxation Times for Mars: A Discussion of Martian Atmospheric Dynamics," R. Goody, M. J. S. Belton, Sept. 9, 1966.	files
8-119	JPL IOM <del>for</del> from R. L. Heacock to Distribution re Mariner Mars 1969 Infrared Spectrometer Procurement Approach, Sept. 15, 1966.	files
8-120	"A Statistical Analysis of the Martian Wave of Darkening and Related Phenomena", J. B. Pollack, E. H. Greenberg, and C. Sagan, November 7, 1966	files
8-121a&b	"Infrared Spectrometer for the Study of Planetary Atmospheres," G. C. Pimentel, and K. C. Herr, with cover letter, Feb. 2, 1967.	files
8-122	Letter from G. C. Pimentel and K. C. Herr to J. Stallkamp re tape speed change controversy, Mariner Mars '69, Feb. 17, 1967.	files
8-123	JPL IOM from B. Carls to R. Heacock re items to be worked out with UC Berkley re Mariner Mars '69 IRS, May 8, 1967.	files
8-124	JPL IOM form J. R. Casani to H. M. Schurmeier re Notes on UC Berkeley Interface Problems, June 5, 1967.	files
8-125	Letter and drafts from N. W. Cunningham to G. C. Pimentel re UC Berkeley management problems for the Mariner Mars '69 IRS, June 1967.	files
8-126	Letter from G. C. Pimentel to H. M. Schurmeier et al., re resignation of Bob Brattain from Mariner Mars '69 IRS team, June 22, 1967.	files
8-127	"A New Estimate for the Amount of Water on Mars," A. K. Suslov files translated from Astronomicheskii Zhurnal, July 27, 1965.	
8-128	Letter from D. E. Bethel to G. C. Pimentel re costs for UC Berkeley Mariner Mars '69 IRS, July 18, 1967.	files
8-129	"Modification of Engineering Mechanics Subsystems Phase I Contract Mode of Operation," July 25, 1967.	files

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8-130	JPL IOM from J. J. Paulson to H. W. Norris re Mariner Mars '69 Infrared Radiometer Design Review, Aug. 1, 1967.	files
8-131	Letter from G. C. Pimentel to L. W. Carls re Reliability and Quality Assurance Plan for the UCB Mariner Mars '69 IRS, Sept. 1, 1967.	files
8-132	Letters between G. C. Pimentel and R. L. Heacock re reports on Monthly Progress of the IRS experiment, Oct. 1967.	files
8-133	JPL IOM VMOS 67-68 from C. R. Gates to R. J. Parks re Summary of Mariner Venus 1972 Probe Mission Study, Nov. 7, 1967.	files
8-134	Letter from R. L. Heacock to S. Chase re successful passing of tests by the Infrared Radiometer for Mariner Mars '69, Nov. 28, 1967.	files
8-135	Brief description of the UCB Infrared Spectrometer, Dec. 1, 1967.	files
8-136	JPL IOM from G. P. Kautz to R. L. Heacock re IRS Experiment Definitive Contract with UC Berkeley, Dec. 11, 1967.	files
8-137a&b	"Experiment Proposal for the 1971 Mars Atmospheric Probe," an aerometry experiment for determining the atmospheric structure and mean molecular weight of the Mars atmosphere from measurements of vehicle acceleration, ambient pressure and temperature, with cover letter, Apr. 7, 1967.	files
8-138	"Preliminary Results of Study of the Photographs of Mars Taken from Mariner 4," B. A. Bronshten, translated from Astronomicheskii Zhurnal, Vol. 43, No. 6, Oct. 25, 1965.	files
8-139	Letter from J. C. Naugle to G. C. Pimentel re problems with Mariner Mars '69 IRS, Jan. 5, 1968.	files
8-140	Letter from H. M. Schurmeier to G. C. Pimentel re management meeting with Hqs, with attached schedule of events <del>to</del> pertinent to the IRS, Jan. 12, 1968.	files
8-141	Mariner Mars '69 Organization Chart for the IRS Experiment Jan. 15, 1968.	files
8-142	JPL IOM from W. G. Fawcett to K. C. Larsen re Technicians Required for MM'69 IRS Work at Berkeley, Jan 19, 1968.	files
8-143	Letter from G. C. Pimentel to H. M. Schurmeier re IRS and JPL-scientists relations, March 4, 1968.	files
8-144	Letter from H. M. Schurmeier to G. C. Pimentel re Pimentel's attitude toward JPL, March 6, 1968.	files
<del>8-145</del>	<del>Letter from L. Li</del>	



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8-145	Letter from S. Silver to W. H. Pickering reUCB's attitude toward JPL, march 19, 1968.	files
8-146	1968 Prospectus, NASA OSSA Planetary Program, with cover letter, march 20, 1968.	files
8-147	JPL IOM from T. Vrebalovich to C. W. Cole re Planetary Mission Meeting, NASA future planning, march 26, 1968.	files
8-148	Letter from G. C. Pimentel to J. Stallkamp re draft version of the IRS description, March 25, 1968.	files
8-149	Letter from J. A. Stallkamp to G. C. Pimentel correcting errors in the IRS description draft, March 29, 1968.	files
8-150	Letter from G. C. Pimentel to H. M. Schurmeier re IRS problems Aug. 6, 1968.	files
8-151	Letter of thanks from G. C. Pimentel to G. H. Stoner of Boeing re an IR S problem, Sept., 1968.	files
8-152	Series of letters assigning the task of evaluating the UCB IRS <del>for</del> for NASA Hdqs. to JPL, and not UCB, Oct. 1968.	files
8-153a	Letter from Pimentel to Cunningham re UCB's ability to evaluate the IRS, Oct. 25, 1968.	files
8-153b	Letter from Pimentel to D. Rea to the same effect as 8-153a Oct. 25, 1968.	files
8-154	Letter from G. C. Pimentel to H. M. Schurmeier re removal of UCB seal from IRS, Nov. 11, 1968.	files
8-155a	Letter from N. W. Cunningham to H. M. Schurmeier terminating analysis of the expected science return of the IRS, Nov. 22, 1968.	files
8-155b	Letter form H. J. Smith to G. C. Pimentel re UCB doing the analysis of the IRS experiment, Nov. 20, 1968.	files
8-156	Letter from J. A. Stallkamp to G. C. Pimentel re results of JPL look at thermal and reflection energy of the IRS during the near encounter, Nov. 27, 1968.	files
8-157	Letter from G. C. Pimentel to H. M. Schurmeier re design changes in Mariner Mars '69, Nov. 27, 1968.	files
8-158	Letter from G. C. Pimentel to J. A. Stallkamp re heat measurements of the IRS, Dec. 4, 1968.	files

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8-159	Series of Letters and Drafts between G. C. Pimentel and W. Becker re News Release on Mariner Mars '69 IRS, Apr. 1, 1969.	files
8-160	TWX from H. M. Schurmeier to G. C. Pimentel re reports on the IRS, Apr 25, 1969.	files
8-161ab&c	Letters from G. C. Pimentel re various needs of the UCB IRS, May 1969.	files
8-162	Pimentel's News Release on Mariner Mars '69 IRS, with letters between Pimentel and Schurmeier, may 1969.	files
8-163	NASA memo from D. G. Rea to N. W. Cunningham with comments on Pimentel's News Release, June 2, 1969.	files
8-164	Letters between G. C. Pimentel and H. M. Schurmeier re Mars encounter sequence, Mariner Mars '69, June 1969.	files
8-165	Letters between Schurmeier and Pimentel re meetings of the Mariner Mars '69 Principal Investigators, June 1969.	files
8-166	Letter from G. C. Pimentel to H. M. Schurmeier re Mariner Mars '69 encounter sequence, June 12, 1969.	files
8-167	Letters between Pimentel and Schurmeier re UCB supporting laboratory work plan, June 13, 1969.	files
8-168	Letter from Pimentel to Schurmeier re UCB's backup work for the IRS experiment, June 20, 1969.	files
8-169	Letters between Pimentel and Schurmeier re working of a UCB New Release on the IRS, June 1969.	files
<del>8-174</del>	<del>Mariner Mars '71 Lander Proposal, June 1966.</del>	<del>files</del>
8-170	"The Solar System," <u>Scientific American</u> , September 1975.	shelf
8-171	<u>Report of the Planetary-Interplanetary Planning Coordination Working group</u> , August 12, 1966.	shelf
8-172	Minutes of the meetings to discuss a comet D'Arrest flyby, Aug. 1970 - Feb. 1971.	shelf
8-173	Minutes of the Mariner Mars '71 Project Staff/Project Reps meetings, no. 114-143, Jan 19 - Dec. 17, 1971.	shelf
8-174	<u>Mariner Mars '71 Lander Proposal</u> , June 1966.	files
8-175	<u>OSSA/JPL Project Management Reports, Mariner Venus '67 and Mariner Mars '64.</u>	shelf

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8-176	<u>Mariner Mars 1971 Orbiter Study Report</u> , Preliminary, Dec. 16, 1966, JPL Document.	<del>files</del> shelf
8-177	<u>Mariner Mars 1971 Orbiter Study Report</u> , Preliminary, JPL Document, Sept. 15, 1967.	shelf
8-178	<u>Proposal for Mariner Mars Orbiter 1969-1971</u> , Volume I, LMSC-A304797-1, Lockheed Missiles and Space Company, Feb. 21, 1964.	shelf
8-179	JPL IOM from F. E. Goddard, F. H. Fe/berg, and J. N. James to C. W. Cole et al., re Mariner Mars '71 Capsule System Advanced Development, Feb. 22, 1967.	files
8-180	JPL IOM from R. V. Meghreblian to R. J. Parks re Mariner Mars '71 Capsule Experiment Proposals, March 31, 1967.	files
8-181	JPL IOM from A. W. Newberry to Distribution re Background and Status of Mariner Mars '71 Probe Proposal, Apr. 4, 1967.	files
8-182	JPL Mariner '64 Project Status Reports, from Aug. 7, 1964 to Dec. 25, 1965.	files
8-183	Draft of a letter from N. W. Cunningham to H. J. Allen re Mariner Mars '71 Probe Proposal, Mar. 9, 1967.	files
8-184	Letter from W. H. Pickering to H. E. Newell re management of Mariner Mars '71 Probe Proposal, mar. 7, 1967.	files
8-185	Letter from O. W. Nicks to W. H. Pickering re Mariner Mars '71 Probe Proposal, Mar. 16, 1967.	files
8-186	JPL IOM from J. N. James to Distribution re JPL Order of Preferences Relating to Mariner '71 Probe, Mar. 22, 1967.	files
8-187	JPL IOM with NASA OSSA Planetary Priorities, Feb. 14, 1967.	files
8-188	<u>NASA Project Approval Document, Research and Development, Mariner Mars '71 Project</u> , June 26, 1967.	files
8-190	"Mariner Mars 1971 Preliminary Project Development Plan," N. W. Cunningham, Mar. 10, 1967.	files
8-191	<u>Mars '71 Technical Study (Probe)</u> , JPL Engineering Planning Document 427, Aug. 15, 1966.	shelf
8-192	<u>Mars '71 Technical Study, Addendum 1(Probe)</u> , JPL Engineering Planning Document 427, Dec. 12, 1966.	shelf
8-193	Mariner Mars '71 Interim Project Status Reports No. 1 - 10 may 19, 1967 - Aug. 11, 1967.	files
8-194	JPL IOMs re Management of Mariner Mars '71 Interim Project team, May 1967.	files

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8-195	Letter from W. H. Pickering to H. E. Newell re formation of Mariner '71 Interim Project Team, June 2, 1967.	files
8-196a&b	Letter from O. W. Nicks to J. N. James re JPL Mariner Mars '71 Orbiter Study, Dec. 29, 1966.	files
8-197	Letter from J. N. James to O. W. Nicks re updated Mars '71 probè proposal, Dec. 15, 1966.	files
8-198	JPL IOM from J. N. James to Distribution re acknowledgement of work done on Mariner Mars 1971 Orbiter Study, Dec. 29, 1966.	files
8-199	JPL IOM from R. J. Parks to Distribution acknowledging work done on the Mariner Mars '71 Orbiter Study, Oct. 12, 1967.	files
8-200	<u>Mariner Mars 1971 Project Policy and Requirements</u> , Preliminary JPL Project Document No. 610-4, Apr. 15, 1968.	shelf
8-201	<u>Mariner Mars 1971 Orbiter Study Report</u> , JPL Technical Document 610-3, Feb. 1, 1968.	shelf
8-202	<u>Mariner Mars '71 Mission study</u> , JPL Lunar and Planetary Projects Office Staff Report, Aug. 22, 1966.	shelf
8-203	JPL IOM from J. N. James to F. H. Felberg re usage of existing hardware for the Mariner Projects, with attached note, Feb. 2, 1966.	files
8-204	JPL IOM from H. M. Schurmeier to Distribution re Establishment of Weekly Project Status Review Meetings, May 20, 1966.	files
8-206	JPL IOM from J. N. James re Appointment of P. K. Eckman as Mission Analysis and Engineering Manager for Mariner Mars '69, May 27, 1966.	files
8-207	JPL IOM from H. M. Schurmeier re Mariner Mars '69 Designations, Sept. 14, 1966.	files
8-208	JPL IOM from H. M. Schurmeier to J. R. Casani et al. re Launch <del>and</del> Mode and Launch Period for Mariner Mars '69, Oct. 13, 1966.	files
8-209	JPL IOM from H. M. Schurmeier to H. Burlage et al. re Mariner Mars '69 System Preliminary Design Review, Nov. 1, 1966.	files
8-210	JPL IOM from H. M. Schurmeier to T. W. Hamilton re Use of Double Precision Orbit Determination Program (DPODP) for Mariner Mars '69, Nov. 14, 1966.	files
8-211	JPL IOM from H. M. Schurmeier to Mariner Mars '69 Preliminary Design Review Board Members re Criteria for the Mission, Nov. 28, 1966.	files

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8-212	Original Mariner Mars '69 Project Set-up, H. M. Schurmeier, Jan. 21, 1966.	files
8-213	JPL IOM <sup>from</sup> H. M. Schurmeier to J. N. James re Mariner Mars '69 Project Plan Evaluation, Jan. 28, 1966.	files
8-214	Notes of H. M. Schurmeier prepared for a meeting with A. Luedecke, Mar. 7, 1966, re Management of Mariner Mars '69.	files
8-215	JPL IOM from H. M. Schurmeier to Distribution re Mariner Mars '69 Assembly Level Environmental Testing, Mar. 25, 1966.	files
8-216	"Procurement Approach for Mariner Mars '69 Project," Prepared by H. M. Schurmeier, Mar. 29, 1966.	files
8-217	JPL IOM from A. R. Luedecke to Senior Staff et al., re Mariner Mars '69 Procurement, Mar. 29, 1966.	files
8-218	JPL IOM from H. M. Schurmeier to Distribution re Mariner Mars '69 Quarterly Project Reviews, Apr. 5, 1966.	files
8-219	NASA memo from D. M. Allison re Mars '71 Review and Evaluation of Probe Instrumentation, Apr. 18, 1967.	files
8-220	Letter from J. N. James to P. G. Thome re Results of Mariner Mars '71 Working Group Meeting of Apr. 27, 1967, written on May 9, 1967.	files
8-221a	JPL IOM from A. W. Newberry to G. Vescelus re Meeting with Langley Research Center on MM '71 Parachute Development, May, 23, 1967.	files
8-221b	Letter from J. N. James to C. J. Donlan re Development and Fabrication of a parachute subsystem by LRC for MM '71, June 9, 1967.	files
8-221c	Letter from J. N. James to C. J. Donlan cancelling meeting at LRC, June 14, 1967.	files
8-222	Briefings for Mariner Mars '71 Probe Working Group Meeting of June 9, 10, 1967.	files
8-223	Summaries of the Mariner Mars 1971 Probe Working Group meetings, Mar. 23 - Aug. 24, 1967.	files
8-224	<u>Mariner Mars '71 Orbiter Preliminary Description</u> , Feb. 12, 1968, JPL Document.	files
8-225	JPL IOM from J. N. James to J. G. Small re Preliminary Project Development Plan for mariner '71 Lander, Oct. 5, 1966.	files

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8-226	Mariner Mars '71 Lander Plan, JPL Document, Nov 1966.	files
8-227	Study of science achievements possible with Mariner spacecraft from 1970 - 1973, prepared in late 1966.	files
8-228	JPL IOM from H. W. Norris to J. N. James re Telecon with Pitt Thome on Nov. 18, 1966, re Mariner Mars '71, Nov. 11, 1966.	files
8-229	JPL IOM from C. W. Cole to J. N. James re Key Technology Development Areas Which Are Critical to Mariner '71, Nov. 29, 1966.	files
8-230	JPL IOM from J. N. James to Technical Division Managers re Priority List for Advanced Developments for Mariner Mars '71, Dec. 2, 1966.	files
8-231	JPL IOM from E. Rechtin to J. N. James re Priority List for Advanced Development, Mariner Mars '71, Dec. 8, 1966.	files
8-232	Letter from W. H. Pickering to H. E. Newell submitting 4 proposals for Mariner Mars '71 Mission, Apr. 14, 1967.	files
8-233	Discussion of Benefits to NASA to direct the Lab(JPL) to manage the Mariner Mars '71 Probe, JPL Document, May 31, 1967.	files
8-234	JPL IOM from J. N. James to W. H. Pickering re Recommended Mariner '71 Probe Implementation plan, July 28, 1967.	files
8-235	Summary of Response to and Interpretation of Mariner M'71 Guidelines, with cover letter, JPL Document, Aug. 1, 1967.	files
8-236	JPL IOM from J. N. James to Distribution re Chart of Mariner Improvements, Aug. 2, 1967.	files
8-237	Letter from R. J. Parks to O. W. Nicks with Mariner Program Pricing Estimates, Aug. 2, 1967.	files
8-238	JPL IOM from A. W. Newberry to Distribution re Mariner Mars '71 Project Activities Guideline, Aug. 9, 1967.	files
8-239	JPL IOM from D. P. Burcham to Technical Division Managers re Planetary Extension Program, Mission and Systems Studies for Consideration, Nov. 8, 1967	files
8-240	<u>Mariner Mars 1969 Lander Technical Feasibility Study, JPL EPD-261, Dec. 28, 1964.</u>	<del>files</del> shelf
8-241	<u>Venus/Mercury Spacecraft Baseline Design Summary, JPL Document, Dec. 12, 1966.</u>	<del>files</del> shelf
8-242	<u>Mission to a Comet: Preliminary Scientific Objectives and Experiments for Use in Advanced Mission Studies, R. G. Brereton et al., JPL Technical Memorandum 33-297, Feb. 15, 1967.</u>	<del>files</del> shelf

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8-243	<u>Mariner Venus/Mercury 70 (MVM70) Mission Feasibility Study</u> , Mariner 1967 Project Office, JPL Document MV1 67-92 Sept. 19, 1967.	<del>file</del> shelf
8-244	<u>Mars Capsule System Alternatives</u> , E. K. Casani, JPL Document 760-16, Dec. 1, 1967.	<del>file</del> shelf
8-245	<u>Performance Improvements to the Mars Entry and Lander System Design</u> , E. K. Casani and E. Frewing, JPL Document 760-19, Jan 19, 1968.	shelf
8-246	<u>Titan Mars '73</u> , JPL Document, Feb. 12, 1968.	files
8-247	<u>Titan Mars '73 Backup Data</u> , JPL Document, Feb. 12, 1968.	Files
8-248	<u>1972 Jupiter Flyby Mission Study</u> , JPL Document ASD 760-22, July 15, 1968.	shelf
8-249	JPL IOM from J. N. James to All Concerned re NASA Planetary Program 10-Year Plan, Sept. 13, 1960.	files
8-250a	JPL IOM from F. E. Goddard to W. H. Pickering et al., re NASA Planetary Program and Space Science matters, June 8, 1962.	files
8-250b	"Seamans Briefing Regarding Interplanetary Probe," prepared by Charles F. Hall, June 6, 1962, discussion of potential NASA probe program.	files
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8-252	"Critique of the Mariner B Spacecraft Design," K. Fishback, with cover memo from J. Small to H. M. Schurmeier, Aug. 2, 1962.	files
8-253	JPL IOM from R. J. Parks to Senior Staff re Cancellation of Mariner R '64 Venus flight, Jan. 8, 1963.	files
8-254	JPL IOM from J. N. James to All Concerned re Termination of the Mariner 2 Mission, Jan. 4, 1963.	files
8-255	<u>The Mariner 2 Mission</u> , with a transcript of a news conference of Dec. 14, 1962, JPL Document-JPL Engineering Planning Document 129, Apr. 12, 1963.	shelf
8-256	"Mariner Scans a Lifeless Venus," <u>National Geographic</u> , F. Sartwell, May 1963.	files
8-257	Memo from R. J. Parks to W. H. Pickering re NASA Policy on Launch Schedules, Aug. 7, 1963.	files
8-258	<u>Mariner-C Venus Mission Feasibility Study</u> , JPL Document, 1965.	files

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8-259	<u>Portfolio of Planetary Missions</u> , Issue No. 3, JPL Document, Mar. 17, 1967.	shelf
8-260	JPL IOM with future missions plan, planetary exploration Sept. 13, 1965.	files
8-261	NASA memos re NASA future activities in the Planetary Program, Oct. - Sept. 1964.	files
8-262	JPL Public Information Publication, "Mariner '71 Fact Sheet," n.d.	files
8-263	JPL Office of Public Information Info Sheet re Mariners 6 and 7, Sept. 11, 1969.	files
8-264	<u>To Mars: The Odyssey of Mariner 4</u> , JPL Technical Memorandum no. 33-229, 1965.	files
8-265	<u>Pioneer Program: Pioneer 1/G F/G Technical Plan</u> , NASA ARC Pioneer Document p-201, June 30, 1970.	files
8-266	<u>Photomosaic Globe of Mars</u> , International Colloquium on Mars at JPL, Nov. 28 - Dec. 1, 1973.	files
8-267	JPL IOM from J. Gerpheide to D. Schneiderman re Mariner C Shroud Failure, Mar. 9, 1965.	files
8-268	JPL IOM from D. Schneiderman to Mariner Venus 67 Project Personnel re Criticalness of launce schedules, Feb. 9, 1967.	files
8-269	JPL IOM from D. Schneiderman to J. N. James re Mariner 67 Increased FY67 Funding Requirement, Dec. 14, 1966.	files
8-270	Letter ffrom O. W. Nicks to D. Schneiderman establishing biological quarantine criteria for the Mariner Venus 67 mission and providing guidance for the preparation of the Prelaunch Contamination Probability Analysis, Aug. 8, 1966.	files
8-271	JPL IOM from D. Schneiderman to Distribution re Justification of Mariner Venus 67 Project, Apr. 20, 1966.	files
8-272	<u>Mariner Venus 1967--Discussion of Scientific Mission Possibilities</u> , JPL Document, Jan. 8, 1966.	files
8-273a	Draft of a Memorandum for Discussion re Planetary Exploration Program Considerations, H. J. Stewart, Oct. <del>16</del> 16, 1964.	files
8-273b	Draft of a Memorandum re Discussion on Mariner Mars '69 Problem, J. J. Stewart, Sept. 21, 1964.	files
8-874	JPL News Release re Mariner Venus '67, June 4, 1967.	files



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8-275a	Mariner Venus 1967 Project Mission Objectives and Plan, Jan. 21, 1966.	files
8-275b	Study Committee Report, "Contractor Support Analysis for Mariner M'69," n.d.	files
8-275c	<u>Voyager Project Plan</u> , Jan. 21, 1966.	files
8-276	JPL Memo for the Record re Policy on Distribution of Photos from Mariner Mars '69, June 29, 1965., W. H. Pickering.	files
8-277	Letters between D. P. Hearth and J. N. James re initiation of follow-on project for mariner 4, Oct. 28, 1966.	files
8-278	JPL IOM from J. N. James re Task Plans and Estimates for Mariner Mars '71, June 2, 1967, with supplement.	files
8-279	NASA Memo for the Record from N. W. Cunningham re Mariner Mars 1969 Planetary Quarantine Criteria, Nov. 18, 1966.	files
8-280	Letter from H. M. Schurmeier to N. W. Cunningham re MM'69 Post-Maneuver Planetary Quarantine Status Report, Apr. 15, 1969.	files
8-281a&b	<u>Memorandum fo Agreement Mariner Mars 1969 Project Visual Imaging Investigation</u> , with cover letter, Aug. 12, 1966.	files
8-282	NASA Memos certifying Mariner M'69 within Planetary Quarantine constraints, Oct. 1968.	files
8-283	Letter from N. W. Cunningham to H. M. Schurmeier re Planetary Quarantine Constraints, Apr. 25, 1966.	files
8-284	Letter from H. M. Schurmeier to N. W. Cunningham re Planetary Quarantine Constraints, Sept. 21, 1966.	files
8-285	Draft of a letter from H. M. Schurmeier to N. W. Cunningham re Recommended Payload Selection for Mariner Mars '69 May 16, 1966.	files
8-286	"Summary of Modifications to Experiment Proposals," H. M. Schurmeier, Mariner Mars '69, May 16, 1966.	files
8-287	JPL IOM from R. L. Heacock to J. A. Stallkamp re Memorandum of Agreement Documents for MM'69 Experiments, Sept., 7, 1966.	files
8-288	Letters from Newell to the Principal Investigators <del>to</del> of the experiments chosen for Mariner Venus '67, advising them of the choice and of their rights and responsibilities, Apr. 5, 1966.	files
8-289	Letter from J. N. James to E. M. Cortright re a Mariner A flight to Mars in 1962, July 27, 1961.	files

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8-290	Letter from C. P. Sonett to J. N. James re Experiment Selection for Mariner Venus '62, Oct. 16, 1961.	files
8-291	Photographs of Mariner Mars '69 Spacecraft, n. d.	files
8-292	Photographs of Mariner Venus '62 Spacecraft, n.d.	files
8-293	JPL IOM from W. E. Giberson and J. W. McGarrity to Distribution with Draft Statement Regarding Flight Project Advanced Engineering(FPAE), Sept, 11, 1967.	files
8-294	JPL & NASA, Preliminary Draft of Future programs for JPL, Sept. 21, 1967.	files
8-295	NASA Research and Development, Lunar and Planetary Exploration, Mariner Mars 69 Project Approval Document, Mar. 28, 1966.	files
8-296	Mariner Venus/Mercury 1973 Science Steering Group Meeting reports, Nos. 1 - 7, Oct. 10, 1969 - July 6, 1970, T. H. Bird.	files
8-297	JPL IOM from D. Schneiderman to W. H. Pickering et al. re General Observations Concerning the Mariner 4, Mariner 5 Accomplishments, July 12, 1967.	files
8-298	Letter from D. Schneiderman to G. A. Reiff re tentative list of experiments for Mariner Venus 1967.	files
8-299	Letter from J. A. Stallkamp to G. C. Pimentel re Memorandum of Agreement for Mariner Mars '69 IRS, <del>11</del> Aug. 11, 1966.	files
8-300	JPL IOM from Fred H. Felberg to Distribution re Lunar and Planetary Program Planning Committee, June 10, 1966.	files
8-301	JPL IOM from J. A. Stallkamp to H. M. Schurmeier re Cruise Science/No Cruise Science Decision for Mariner '69, Mar. 17, 1966.	files
8-302	Letter from G. C. Pimentel to H. M. Schurmeier re problems with Mariner Mars '69 Letter Contract, Aug. 22, 1966.	files
8-303	Letter from G. C. Pimentel to J. A. Stallkamp re ordering in importance the experiments for Mariner Mars '69, June 27, 1966.	files
8-304	JPL IOM from A. L. Kistler to J. A. Stallkamp re Scientific Payload Recommendation for Mariner Mars 1969 Flyby Mission Revision, May 16, 1966.	files
8-305	Letter from W. H. Pickering to H. E. Newell re recommended payload for Mariner Mars '69, May 19, 1966.	files
8-306	"Radio Occultation Measurement of the Martian Atmosphere over Two Regions by the Mariner 4 Space Probe," presented to the Seventh International Space Science Symposium, Committee on Space Research (COSPAR), Vienna, Austria, May 11-17, 1966, A. Kliore, D. L. Cain, and G. S. Levy, Apr. 15, 1966.	files

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8-307	Mariner 1971 Project Preliminary Review, <del>1/1/</del> July 19, 1967. files	
8-308	"Mars '71 Mission Study," June 20, 1966, JPL Document, G. M. Smith. files	
8-309	JPL IOM from <del>W.</del> P. N. Hurlan re Revised Mission Objectives for Mariner 1971, July 5, 1966. files	
8-310	JPL IOM from P. N. Hurlan to Distribution re Second Revised Mission Objectives for Mariner 1971, July 8, 1966, with note from Schurmeier(?) to Pickering. files	
8-311	JPL IOM from A. W. Newberry to Distribution re Mariner M '71 Probe Proposal Background and Status, Apr. 4, 1967. files	
8-312	JPL IOM from R. H. Felberg to R. J. Parks re JPL Planetary Program, Nov. 4, 1964. files	
8-313	JPL IOM from J. N. James to W. H. Pickering and A. R. Luedcke re Plan for Preparing a Mars '71 (Plus Venus 72/73) Proposal, June 3, 1966. files	
8-314	JPL Document re Mariner '71 Proposal Mission Objectives and Goals, E. Pounder, June 30, 1966. files	
8-315	JPL IOM from P. N. Hurlan to A. W. Newberry re Mariner '71 Mission Proposal Objectives Team Report, July 20, 1966. files	
8-316	JPL IOM from A. W. Newberry to Distribution re Summary of Presentation to OSSA on a Mariner Venus '70 Mission, May 5, 1967. files	
8-317	Documents Re Mariner Venus Mercury '73 Flyby Mission Scientific Instruments Proposals, <del>1/1/</del> May 1968 - Aug. 1970. files	
8-318	NASA Management Instruction 7100.1 Re Conduct of Space Science Program - Selection and Support of Scientific Investigation and Investigators, with letters of recommended improvement, Nov. 1966. files	
8-319	TWX from R. J. Parks to A. J. Calio re Proposed Flight Projects Advanced Engineering Efforts, Sept. 20, 1967. files	
8-320	TWX from D. P. Heath to J. N. James re early initiation of Mariner 4 Project, Nov. 10., 1966. files	
8-321	TWX from H. E. Newell to W. H. Pickering re Selection of Experiments for Mariner Mars '69, May 25, 1966. files	
8-322	TWX from H. E. Newell to W. H. Pickering re Experiments Selected for Mariner Venus '67, Feb. 4, 1966. files	
8-323	TWX from H. E. Newell to E. J. Smith re Experiments for Mariner Venus '67, Dec. 30, 1965. files	

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8-324	JPL IOM from Conway Snyder to D. Schneiderman re Proposed Scientific Mission for Mariner Venus 1967, Jan. 14, 1966.	files
8-325	Proposed Weight Breakdown and Modifications to Incorporate Science Instruments for a Mariner C Mission to Venus '67, R. K. Case, R. F. Draper, P. Steinbrook, Jan. 14, 1966.	files
8-326	Trajectory Considerations for Mariner C Venus Mission, D. A. Tito, Jan. 14, 1966.	files
8-327	Letter from A. Silverstein to W. H. Pickering re Approved Experiments for Mariner <del>V-62</del> <sup>A</sup> , Dec. 22, 1960.	files
8-328	Letter from H. E. Newell to W. H. Pickering re Approved Experiments for Mariner Venus '62, Dec. 5, 1961.	files
8-329	Letter from Newell to Pickering re Additional Experiments for Mariner <del>Mars-64</del> <sup>B</sup> , Dec. 1, 1961.	files
8-330	Letter from Newell to Pickering re Experiments Removed from Tentative List for Mariner <del>Mars-64</del> <sup>B</sup> , May 4, 1962.	files
8-331	JPL IOM from R. J. Parks to Senior Staff re Cancellation of Mariner R to Venus in '64, Jan. 8, 1963.	files
8-332	<del>JPL</del> NASA Letter from A. J. Calio with 5 possible Planetary Programs for NASA, Sept. 11, 1967.	files
8-333	NASA Memo for the Record from H. E. Newell re Planning for Experiments for Mariner <del>Venus-62</del> <sup>A</sup> , Apr. 7, 1961.	files
8-334	Letter from Parks to Sonett re Cancelled Experiments for Mariner <del>V-62</del> <sup>A</sup> , Mar. 22, 1961.	files
8-335	Letter from James to Sonett re Experiments for Mariner R to Venus '62, Oct. 6, 1961.	files
8-336	Letter from A. R. Hibbs to C. P. Sonett re Tentative List of Experiments for Mariner <del>M-64</del> <sup>B</sup> , June 5, 1961.	files
8-337	Mariner R Mission Objectives and Design Criteria, Sept. 29, 1961.	files
8-338	Lists of Guests with Gallery Access for the Mariner 4 Encounter, July 7, 1965.	files
8-339	Letter from Pickering to Newell re Proposed Scientific Instruments for Mariner Venus 1967, Jan. 17, 1966.	files
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8-360	JPL IOM from J. N. James re Mariner Mars '71 Costs, July 12, 1967	files
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8-386	JPL IOM from D. Schneiderman to A. R. Luedcke re Delays in Mariner C Science Reports, with Bibliography, Jan 30, 1967.	files
8-387	JPL IOM from H. Trostle to Glenda re Mariner C Scientific Instrument Status, Aug. 16, 1963.	files
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5	Memorandum to Distribution from W. H. Pickering (JPL), subject: Appointment of Source Selection Board for Lunar Orbiter TV System Design Study Contract, dated August 8, 1960	Files
6	JPL Memo from C. Carrier to H. M. Schurmeier, subject; Status and Future of the Lunar Orbiting Capsule Program, dated December 30, 1960.	Files
7	JPL Memo from C.R. Carrier, etc. to C. I. Cummings, subject: Lunar Orbiter Project - Observer, February 17, 1961.	Files
8	JPL Memo from C. R. Carrier and W. J. Downhower to C.I.Cummings, subject: Centaur Lunar Orbiting Spacecraft, February 24, 1961.	Files
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24.	a. JPL Memo from H. M. Schurmeier to Distribution, subject: Meeting on Lunar Orbiter Program, dated August 22, 1962.	Files
	b. Attachment, Orbiter Program Comparison, with Time Scale Chart.	Files
25.	JPL paper, "Early Lunar Photography Requirements," by C. F. Campen, Jr., Space Sciences Division, dated 23 August, 1962.	Files
26	Paper, "Lunar Orbiter Program". A study review, dated August 30, 1962.	Files
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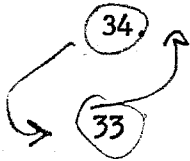
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29	a. Letter from C. I. Cummings, Lunar Program Director, to Oran Nicks, concerning desired Orbiter program, dated October 26, 1962.	Files
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3	NASA Memorandum for Space Science Steering Committee Members and Subcommittee Chairmen, and Division Directors, Subject: Space Science Steering Committee procedures concerning recommended scientific space flight investigations, May 8, 1964. Appendix A: "Recommendation to the Space Science Steering Committee" format with attached formats for space probes and satellites.	"
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8	Memorandum of Agreement between Office of Manned Space Flight and Edgar M. Cortright Director Office of Space Sciences, July 25, 1963.	Dr. Shea "
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25a	Robert Jastrow, <u>Journal of Geophysical Research</u> , "Symposium on the Exploration of Space," Volume 64, No. 11, November, 1959, pp. 1647-1651, NASA.	
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31.	Notebooks of Homer E. Newell, 1954-1962. A Chronological Index of Volumes with Brief Annotation. Eugene M. Emme, NASA Historian, 15 January 1970.	Files
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37.	Document, <u>Space Flight Programs</u> , prepared by Office of Space Flight Programs, April 1, 1960.	Files
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42.	Letter from Charles H. Townes, National Academy of Sciences, National Research Council, Space Science Board - Chairman, to Dr. James C. Fletcher, Administrator, NASA, Washington, D.C. Presentation of a program to explore major outer planets, Jupiter and Saturn during latter part of this decade. February 22, 1972.	Files
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45	Letter from Homer E. Newell, Associate Administrator for Space Science & Applications to Professor Harold C. Urey, regarding scientific controversy of the moon. September 1, 1966.	Files
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11-125a	Draft of a description of the problems related to landing on the Moon, N. E. <del>Collovin</del> <sup>Collovin</sup> , Oct. 28, 1962.	files
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11-132	Letter from Newell to Pickering re Observers and Representatives of the Space Sciences Steering Committee Subcommittees, Oct. 9, 1962.	files
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13-4	TWX from E. M. Cortright to Pickering re Voyager Procurement Plan, Jan. 13, 1965.	files
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